

MANUFACTURERS RECORD

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER

Trade-Name Registered in the U. S. Patent Office

VOL. LXV. No. 26.
WEEKLY.

BALTIMORE, JULY 2, 1914.

\$4.00 A YEAR.
{ SINGLE COPIES, 15 CENTS.

PUBLISHED EVERY THURSDAY BY THE
MANUFACTURERS RECORD PUBLISHING CO.

RICHARD H. EDMONDS, Pres. VICTOR H. POWER, Treas.
FRANK GOULD, Vice-Pres. I. S. FIELD, Sec'y.

RICHARD H. EDMONDS, Editor and General Manager

EDWARD INGLE, Managing Editor

ALBERT PHENIS, Staff Correspondent

BRANCH OFFICES:

NEW YORK, 52 Broadway CHICAGO, 1409 Fisher Bldg.
BOSTON, 733 Old South Bldg. ST. LOUIS, 627-630 Century Bldg.
NEW ORLEANS, 814 Maison Blanche

Subscription \$4 a year (payable in advance) to United States, Mexico, Cuba, Porto Rico, Hawaii and the Philippines. To Foreign Countries (including Canada) in the Postal Union, \$6.50 a year.

[Entered at the Baltimore Postoffice as second-class matter.]

In order to avoid delays, all correspondence pertaining to news or advertising matters should be addressed directly to the MANUFACTURERS RECORD, Baltimore, Md., and not to individual editors, officers, employees or any branch office.

MANY THINGS OF INTEREST TO EVERY INTELLIGENT MAN.

MANY special articles and news items of unusual value and of interest to every intelligent man are found in this issue of the MANUFACTURERS RECORD. Some of them may be briefly summarized as follows:

A practical illustration of the value of water transportation by a shipment of steel piling from Pittsburgh down the Ohio and Mississippi rivers to Memphis, showing a very large saving in freight rates as compared with rail transportation, is given. It is interesting in this connection to note the fact that a self-propelled barge is to be loaded at New Orleans early in July and make the trip up the Mississippi to St. Paul to demonstrate the feasibility of this system of transportation.

There is an important story of a new system for levee construction work now in operation at Memphis, and illustrations of the method will be found interesting to all who are studying the great problem of the control of rivers and the protection of adjacent lands from overflow. Experts claim that this system will revolutionize levee construction.

Baltimore has in progress the construction of a sewerage system, the repaving of the city and the relaying of the street-railway tracks, all of which, in connection with kindred work, will represent an ultimate outlay of \$100,000,000 or more. Many engineering and paving problems have been met and overcome. The story of how the repaving of the most crowded streets in Baltimore and the relaying of the track of the street railway at the same time are being done without in the slightest interfering with traffic is graphically told and illustrated.

A movement is under way by one of the foremost coal operators of England, thought by some to be the largest coal operator in the world, considering the wideness of his interests, to combine a large number of coal companies in this country.

The Baldwin Locomotive Works have in operation some very interesting and valuable systems relating to the employment of men, to a savings-bank system in connection with their employees, and to the payment of accident and death benefits. These are all interestingly outlined by the president of the company, A. B. Johnson.

The United States Government, in co-operation with State and county officials, is preparing to take charge of the active supervision, in connection with the American Highway Association, of roads connecting Washington and Atlanta. The plan is to connect existing good roads and those under contract, not with a view to making the shortest route between Washington and Atlanta, but to make available existing roads and those contracted for. The

first map ever published of this proposed route is given in this issue.

Great changes are constantly taking place in the petroleum output of this country. The South is now producing about four times as much oil as the output of the entire country in 1880. Some interesting details in regard to the output in the South by States and by sections are given today.

Probably the largest sale of reclamation bonds ever made in this country at one time has been closed by a reclamation district in Missouri, which has sold to Chicago buyers \$4,750,000 bonds, the proceeds of which are to be used in extensive reclamation undertakings.

In industrial enterprises the South shows a great many new undertakings of exceptional importance during the past week, indicative of a degree of coming activity in construction work which augurs well for a widespread development throughout that section. These include many enterprises of unusual "pith and moment," such, for instance, as the final closing of contracts between the city and the railroad interests for the building by the Clinchfield of a great coal-shipping pier and for coal-storage bins at Charleston, destined to make that port one of the great coal-shipping centers of the country; a plan for building at Tampa at a cost of \$500,000 a 1000-foot pier, and drying and handling facilities by a phosphate company; the construction at Galveston of still another compress and warehouse plant in addition to the one described last week in the MANUFACTURERS RECORD, the building to be fireproof and to cover an area of 720x640 feet; a call for bids for dredging and filling in at New Orleans for the site on which the city is to build six concrete cotton warehouses eight stories high, 600x100 ft. and each with a capacity of 54,000 bales, at an aggregate cost of about \$3,000,000.

Many other enterprises of equal importance are among the things reported in this issue of the MANUFACTURERS RECORD, as well as many other articles of equal interest to those mentioned.

DO IT NOW.

BUILDING material is low, labor is abundant and eager for work, architects and contractors have more time now to plan and carry out contracts than in periods of activity. Lumber is cheap, machinery builders are anxious for orders, pig-iron is much lower in price than it ought to be to yield a fair profit to the producers, and to many other things pertaining to building, to machinery and to construction work the same things apply.

Every man who knows this country and its recuperative power knows that this condition will sooner or later give way to abounding prosperity. Just how soon that that prosperity will come no one can say, but it may be much nearer here than many people anticipate. Even, however, if it should be somewhat delayed in its coming, it will eventually be here in full power.

The man who wants a home and has the money with which to build it can build now to better advantage than when prosperity comes, and at a much lower cost and with more care and attention on the part of contractors and mechanics. The manufacturing concern that needs new equipment, or will need it when prosperity comes, can secure this equipment today to much better advantage than it can do at a time when every factory is crowded and when machinery people are able to command a full price for everything they turn out.

There are thousands of concerns in this country that fully intend to enlarge their plants and have available at present the money which could be thus expended, but who, by reason of the spirit of pes-

simism abroad, merely sit down and wait, taking the ground that they will do nothing until times are better. When times are better they will then rush like a flock of sheep, each one struggling to be the first to enlarge his plant or to buy new equipment, and the cost will be greater than it would be at present, and the plant will be under construction or under enlargement at the very time when it should be running to its utmost capacity to turn out goods. A boom period is no time for a wise expenditure in the enlargement of plants. A period of depression is the time for doing work of this kind.

Thousands and tens of thousands of men in this country are intending to build homes for themselves, but are waiting for what they think will be a more propitious moment, when everybody is an optimist rather than a pessimist. When they do undertake to build, every item will cost them more and they will find great difficulty in securing as much attention in construction work and in the equipment of their homes as could be had now.

There are some concerns that could not raise the money for betterments at such a period as this. There are many men who cannot afford to put money into the building of a home at present. These are not the ones we are considering. The ones who ought to do these things are the ones who have the money available, but who follow the general talk of the day and sit down and do little or nothing, merely because they say times are bad and "we will wait for better times."

This is pre-eminently the time when every man who expects to build a home, a store or an office building, if he has the money, should do it. This is the time when every manufacturing enterprise which knows that it needs new machinery or the enlargement of its plant, and has the money available, should do the work now. This is the time when our municipalities should press as vigorously as possible all of their improvements in order to get the benefit of the lower prices of materials now prevailing as compared with boom periods. Almost over night a change in business could be brought about if people who are able to do this building and construction work would undertake it now.

THE ECONOMIC VALUE OF SANITARY IMPROVEMENTS.

EVERY public official who fails to do his utmost duty in order to bring about a good water supply and an adequate sewerage system in towns and cities is facing a great responsibility. In many communities men will not encourage the spending of money for municipal betterments either because some taxpayers are too penurious to encourage such work or because they are afraid of being charged with extravagance in expending money for such things.

When men come fully to realize the economic loss in preventable diseases and deaths, there will probably be on the part of many a quicker recognition of the importance of these things than when they are merely considering expenditures for water-works and sewerage systems and street paving and a cleaning up of cities as desirable things, but not as essential. These things are indeed essential. They are the most essential things in the life of a community.

The State Board of Health of Kentucky has just issued a bulletin in which it claims that the economic loss in 1913 in the State of Kentucky from typhoid fever alone was over \$5,300,000, which is within \$1,700,000 of the total revenue of the State for the same year.

Typhoid fever is, to a large extent, a preventable disease. Its existence is due largely to bad sanitary conditions, to impure water or milk, or other causes

which are known and can be overcome. The Kentucky bulletin states that tests made show that 40 per cent. of all the wells and springs in the State are contaminated, and that the water from them is unfit for use unless properly filtered or purified in some other way. Kentucky has no superiority in these bad conditions. They apply largely to every section and to every State. If to the loss from typhoid fever could be added the losses from other preventable diseases, the total would be staggering. Men are inclined to forget that, outside of the sorrow and suffering that come from sickness and death, there is an economic drain upon the community for every case of sickness and of death. This is pre-eminently true in case of the death of the young and the middle-aged, and these are the people who suffer most from typhoid.

On the farm and in the villages and towns of all sections of this country entirely too little attention is given to the importance of the things which prevent sickness and make for health. Too little attention is given to the question of pure water or pure milk, or adequate sanitary sewerage methods, and to well-paved streets and alleys, and it is only when streets and alleys are well paved that they can be properly cleaned. Too many officials seem to regard these improvements as things desirable, but not as essential, and too many property owners are always fighting against an increase of taxation with which to provide these improvements. Many hotels, especially in small towns, and some in larger cities, are indescribably insanitary. Some of these places disgrace civilization and make a man wonder where their managers were reared, whether in a stable or a hogpen. Hundreds of hotels can be found whose sanitary conditions make them unfit for hogpens, much less for human beings.

The facts presented by the Kentucky Board of Health are not new, but in the way in which they have been stated as they relate to Kentucky they should awaken a widespread interest in every other State.

The story of what Asheville did in the elimination from that city of typhoid fever, and of what Memphis did in changing a fever-infested city to one of the healthiest cities in the country by adequate sewerage system and other improvements, should be studied by the officials and by the people of every community in the country, North and West, as well as South.

NEW FIELDS FOR THE AUTOMOBILE.

IN none of its fields of usefulness has the automobile been more conspicuous, with respect to the remarkable changes which it is capable of accomplishing, than in the work of public transportation. In this country some progress has been made, especially with autobuses in New York, but it has done comparatively little along such lines as compared with London, where street cars never have attained the popularity and extended use in proportion to the number of inhabitants that they have in American cities. There the automobile, in the form of the "autobus," has achieved a great success in public esteem. In that city there are now more than 3000 autobuses in operation, and they have entirely taken the place of the old-time horse-drawn omnibuses, which, until the year 1901, with a total of 3736 vehicles in service, they held the field of traffic in the heart of London undisputed. Then it was that the first automobile omnibuses appeared, according to a paper recently read at Toronto by John A. McCollum of New York.

As an experiment ten of the motor-driven busses were first put in operation; but, as in the case of other innovations, the public was slow to "take hold," and four years passed until something decisive was done. Then, in 1905, there were 241 motor-buses in daily service, and since then the new cars have driven the horse omnibuses into retirement, the last of them having vanished from the London streets some time ago. Each of the motorbuses can seat 34 passengers, a decided increase over the horse vehicles, and they make better running time than the street cars. These features and their flexibility in operation have won them friends, although their rate of fare is 20 per cent. higher than that charged on the cars, and they carried last year a total of 676,000,000 passengers, which Mr. McCollum says is greater than the number of passengers paying cash fares and transfers on the surface railroads in the

boroughs of Manhattan and the Bronx in the city of New York.

It will be readily appreciated that the possibility of changing routes when unusual conditions on the streets make it desirable to do so is a strong factor in establishing the motorbus in favor; also its ability to run alongside of the curb to receive or discharge passengers, who are therefore relieved of the trouble and danger of avoiding other vehicles, as they are obliged to do when going from the curb to street cars whose tracks lie in the center of the roadway. The operating efficiency of the autobuses is also high. Statistics are presented showing that in 1913 there were about 2200 of those vehicles in London which ran daily an average of 117 miles each, or a total of 55,000,000 bus miles for the year. There are also in Paris over 1000 motorbuses, affording regular and good passenger service under rather different conditions, however, than those prevailing in the English capital. Besides, in other European cities new motorbus routes are steadily being established.

While it is true that the efficient life of the motorbus is not as great, according to Mr. McCollum's paper, as that of the average of street cars, which run upon smoother surfaces, i. e., rails, they have advantages such as those mentioned, and, in addition, the fact that their line of travel cannot be wholly blocked by the breaking down of one vehicle as the breaking down of a street car can block an entire railroad. They are also freed from the heavy expenses of providing power stations, etc. This enables the operation of an autobus line to be established with a much smaller investment of capital than is required to establish a line of street railway to conduct the same service. He shows, furthermore, that the investment as displayed by outstanding securities was in the case of the London autobus company only about \$20,000,000, which includes \$5,000,000 put in the property last year, as compared with \$53,000,000 for the London Railways, the latter operating about 148 miles of line and the autobuses operating over 300 miles.

As the street paving in London is maintained in excellent condition generally, the maintenance expenses of an autobus line are moderate, and such methods of public transportation service are likely to extend in this country as improved smooth pavements are extended in various cities. They afford certain advantages as compared with electric railway service, and many persons would doubtless be willing to pay a somewhat higher rate of fare to enjoy them.

In this connection it is important as well as interesting to observe a new field in which the motor car is used. In St. Louis a man has fitted up a motor truck as a delicatessen store and goes about the city selling his wares, apparently finding that his increased sales resulting from this unique mode of carrying his goods to his customers instead of waiting for them to come to his place of business much more than compensates him for the expenses of operating a store on wheels.

LEGISLATIVE COBBLING.

CONCERNING the predominance of lawyers in lawmaking in this country, H. T. Buie of Murfreesboro, Ark., writes to the MANUFACTURERS RECORD:

How can men, with a training which we ordinarily know as their profession, make laws to govern the business interests of a great country like this? We have practically been misrepresented in Congress ever since its inception, and consequently have been ruled by one class of men, the lawyers. The sooner a change can be brought about in our Congressional representations the better it will be for the country. Why not elect a few farmers now and then, some cobblers, a blacksmith or two, and other representatives of our heterogeneous population? Seems to me this would lighten the load and we would some day find out where we were at.

If actual lawyers dominated in legislation, that is to say, men trained to the law, thoroughly acquainted with its fundamental principles and with intelligence sufficient to apply those principles safely in framing laws, the situation might not be so bad. But in recent years there has been a steady decline in the quality of individuals in Congress called lawyers because they may have been graduated in some third-rate "law school," and just at present there are rather striking illustrations of the

ill-effects of entrusting the framing of laws affecting fundamental facts of American life to individuals who, with all due respect to real cobblers and competent blacksmiths, are simply legislative cobblers and tinkers. For proof study, for instance, the history of the income-tax law to date.

A NICARAGUAN CANAL ROUTE MAY SOME DAY BE NEEDED.

IF the proposed treaty with Nicaragua shall be ratified, the United States would receive an exclusive right to build a canal through that country. This might prove a much more valuable concession than is now generally understood. That feature of the treaty should be given very careful consideration by Congress and by the people of the country.

If ever the actual facts can be obtained as to what influences were brought to bear to make this country accept the Panama route in preference to the Nicaragua route for an Isthmian canal, it is altogether probable that some rather remarkable developments will be brought forth. At that time it seemed that every reason, such as proximity to our country, cheapness of construction, advantages due to the character of the region through which the canal would extend, and freedom from the diseases which then afflicted Panama, made the Nicaraguan route the only one worth serious consideration. Suddenly, however, there was a shifting of the scene, and Nicaragua was pushed into the background and Panama was pushed to the front. Who did it and why was it done are questions which ought some day to have a final answer. Were the reasons good in morals as in strategic location for the canal? Or were there other influences which would not stand the light of day that brought about this sudden change?

The Nicaraguan Canal would be probably about 1000 miles nearer much of this country than the Panama Canal. It would thus save about 2000 miles in distance for coastwise trade passing through it from the South Atlantic and Gulf ports to California and from California to the Atlantic coast. Why should the commerce of this country be driven more than 2000 miles out of its way in order to compel it to use a canal at Panama, when a Nicaraguan Canal would have saved that distance? Why was it, moreover, that the Panama route was chosen when the cost of building the canal at that point was known to be very much greater than the cost of a canal through Nicaragua? Moreover, the Panama Canal must always be subject to the dangers of earthquakes. In figuring the cost of maintaining the canal this danger ought to be taken into account. A distinguished engineer in a letter to the MANUFACTURERS RECORD recently estimated that the cost of maintaining and operating the canal, the cost of the annual charge against the investment, a proper annual charge for insurance against destruction by earthquakes, etc., would foot up a total of probably \$75,000,000 a year as the amount that ought to be charged against the cost, operation and maintenance of the canal if this Government adopts in its bookkeeping system in connection therewith the same safeguards that would be adopted by a private concern owning the canal.

We are proposing now to give practically free to the world this vast outlay in original investment, and to some extent this annual cost of maintenance and operation, and bear nearly all of the burden ourselves. We are not asking the world to share in the original cost or in this proper charge against maintenance and insurance. We are making the world a present of all of that. Indeed, it would seem that we are a wonderfully altruistic nation. Some of our people thought we were spending \$400,000,000 of our money for the benefit of our commerce, and especially for our coastwise trade, with a view to increasing commerce between the Atlantic and the Pacific coasts, and reducing to a minimum the cost of freight between these coasts. It was thought that the canal would save to the country many millions of dollars annually by lessening the cost of freight on all water-borne business, and in many places compelling the railroads to adjust their freight rates to a more equitable basis on some of the through commerce between the Atlantic and the Pacific coasts. It seems, however, that those who were working with that idea in view were entirely mistaken, for it has been decided that

we were acting broadly for the world's interests rather than for our own. To this extent our coastwise trade is to be burdened with a heavy tax, when, so far as this country is concerned, the canal is as much an extension of our waterway system as is the Mississippi River itself. If we were to spend \$500,000,000 on improving the Mississippi River and its tributaries with the idea that this would increase the prosperity of the country and reduce freight rates, it would be a rather novel situation if at the end of the work it was decided to put a toll on every ton of freight passing up and down the river. That is what we are doing with the Panama Canal, because we have yielded to the thought that the world requires this of us on the ground that our national honor is at stake. It is defended by some people on the ground that the freedom from tolls would be a subsidy to coastwise shipping. In exactly the same way freedom from tolls on any river that the nation has improved is a subsidy to shipping, and in no other way is it a subsidy.

It may be well, therefore, in view of the possibilities that the Panama Canal may some day come in contact with a vigorous earthquake, and in order that we may open a waterway from the Atlantic to the Pacific for the benefit of our own country, that the nation shall safeguard the future by securing in some way from Nicaragua the exclusive right to build a canal through that country. If such a canal could be built, as was estimated some years ago, for about \$100,000,000 or less, its advantages as compared with the Panama route, added to the fact that we could set our own terms for its use by our own vessels without question being raised by any other country as to national honor, might in time not only justify, but demand its construction.

For these reasons that feature of the proposed treaty with Nicaragua should be given very careful attention. The right to build such a canal may be worth very much more in the future than now appears.

THE ATLANTA ROAD CONGRESS AND THE RAILROADS.

THE railroads of the South are preparing to take a very active part in assisting in making the Road Congress in Atlanta a great success. Mr. J. M. Culp, vice-president of the Southern Railway, in a letter to the MANUFACTURERS RECORD referring to the Road Congress, says:

We will also at the proper time arrange for the necessary advertising, with the idea of stimulating as much interest as possible in this important occasion and with a view of having a large attendance. Up to this time we have no special trains in contemplation. However, as stated, the matter is receiving our careful attention, and all of these matters will be promptly attended to.

Mr. J. J. Camplin, vice-president and traffic manager of the Carolina, Clinchfield & Ohio Railway, writes:

I read with much interest the editorial in your issue of June 13 entitled "The Road Congress at Atlanta and the Railroads." This company will be pleased to co-operate in every possible way to make the Atlanta meeting a success, and will establish reduced rates and advertise along its line the meeting and its purpose.

These letters voice the general feeling of the railroad people of the South in their desire to co-operate in the work of the American Road Congress.

WHAT THE TEACHERS ARE DOING FOR THE SOUTH.

BRUCE R. PAYNE, president of the George Peabody College for teachers of Nashville, Tenn., in a letter to the MANUFACTURERS RECORD, pays a high tribute to the school teachers of the South. Writing about their work, he says:

The greatest distributors of knowledge in the South today are the school teachers. Newspapers do not go where they go, and if they even went they could not be read very often.

There is no group of people in the English-speaking world as eager for information as the public school teachers of the South, who are sacrificing their time and strength to go to summer schools and teachers' institutes for information and guidance. They return from these summer schools and institutions buoyant with enthusiasm and eager to dispense the information they have gathered. I know from hundreds and hundreds of experiences that

they take back this information and put it to better use than any other class of society.

The library facilities constitute the greatest weakness in the teaching profession; that is, the possibility of giving the teachers first hand the data contained in books and journals such as your own is one of the burdens and sorrows of men whose minds and bodies are consecrated to these 148,000 teachers and the 8,000,000 boys and girls (citizens of tomorrow) whose destinies the teachers control.

The only thing in the world that hinders me from giving to every teacher of the South who will come to us next week from every State in the South a copy of the MANUFACTURERS RECORD is the lack of money to do it with.

SIX STATES EPITOMIZED.

NAMES and addresses of more than 6000 manufacturers, dealers and other shippers at nearly 700 points in Virginia, North Carolina, South Carolina, Georgia, Alabama and Florida, filling twenty-seven pages of the really monumental Seaboard Air Line Railway Shippers' Guide, constitute an epitome of the many and varied activities within the six States traversed by the lines of that system. Only names and addresses at places on the lines are mentioned in this list, forming part of a handsomely bound and profusely illustrated volume of 500 pages. The distribution of the places is Florida, 217; Georgia, 184; North Carolina, 152; South Carolina, 67; Alabama, 50, and Virginia, 27—a total of 697. At these places are 3116 manufacturers, 3497 other shippers, including a number of manufacturers, and 28 compress companies—a total of 6641. The character of the diversified industries is shown in the following list:

Industry.	No. of plants.
Lumber mills.....	874
Textile mills.....	298
Fertilizer factories.....	181
Bottling works.....	166
Foundries.....	158
Tobacco factories.....	147
Naval stores.....	104
Ice factories.....	103
Cottonseed-oil mills.....	100
Flour and grist mills.....	91
Brick kilns.....	90
Cold-storage plants.....	88
Barrel, box, crate, etc., factories.....	75
Breweries and distilleries.....	69
Furniture factories.....	59
Iron and steel plants.....	59
Fruit and vegetable packing.....	50
Vehicle factories.....	48
Harness and saddlery works.....	45
Mattresses and bed springs.....	42
Paper factories.....	34
Agricultural implement works.....	29
Paint and varnish factories.....	25
Broom factories.....	22
Limekilns.....	21
Canneries.....	20
Bag factories.....	19
Furnaces.....	18
Turpentine stills.....	18
Trunk and bag factories.....	16
Stave and heading mills.....	14
Cement plants.....	13
Car and locomotive works.....	12
Stove factories.....	8
Coffin factories.....	7
Baking-powder factories.....	3

Dealers and shippers by classes of articles handled are as follows:

Fruits and vegetables.....	1701
Hay, grain, flour, etc.....	404
Produce.....	325
Wholesale groceries.....	319
Automobiles.....	232
Agricultural implements.....	115
Wholesale hardware.....	100
Oysters and fish.....	93
Wholesale dry goods, etc.....	57
Wholesale drugs.....	52
Sand and gravel.....	42
Cotton compress operators.....	28
Phosphate mines.....	19
Quarries.....	19
Tobacco warehouses.....	19

In these lists there are a few duplications because of the lack of close discrimination in the arrange-

ment of the original list upon which they have been based, tobacco factories and tobacco shippers, for instance, being included under one head, and naval stores including turpentine stills. But the fifty-one classes mentioned are indicative of general conditions at present, and, to some extent, prophetic. It is not by chance that the three industries having the largest number of establishments in the list are lumber, 874; textile, 298; fertilizers, 181; or that cigar, cigarette and tobacco factories should number 147, and foundries, 158; naval stores plants, 104; ice factories, 103, and cottonseed-oil mills, 100. Upon such industries has developed in the past thirty years the manufacturing importance of the South. But there are nearly 1200 establishments in the list representing 28 other distinct industries, some of them of long standing, others comparatively new.

The cold-storage plants, separate or in connection with other undertakings; the canneries, the packing-houses and the crate and box factories are increasing in number with the expansion of the activities shown in 1701 shippers of fruits and vegetables, of whom the greatest number, 1593, are in Florida alone. Canneries and packing-houses point to a wise and profitable utilization of what would otherwise be so much waste after the shipments of the early products to Northern and Western markets have ended. But the greater diversification of industries will mean a wider home market for such products.

These lists are a guide to the student of material development in the Southeastern States. For details he has the 182 pages of the main text of the volume dealing with the natural resources of the six States, transportation facilities, industries, etc., as a whole, and with the equipment for production and comfort of each of the States.

HOW IS BUSINESS?

IN view of the general business depression it is interesting to receive an occasional letter reporting optimistic business conditions. Such a letter comes from the American Machine & Manufacturing Co. of Greenville, S. C., which writes:

For some time we have been operating our plant continuously day and night so as to keep up with the volume of business we have on hand. We offer this information as an evidence of the generally optimistic outlook for the oil-mill industry.

This company also reports the closing of a contract for a new oil mill, and adds that this makes the sixth oil mill for which they have received contracts to build this season. Who else can report activity such as is here indicated?

The MANUFACTURERS RECORD always welcomes from its readers facts and discussions about business conditions.

INDUSTRIAL ACTIVITIES THROUGHOUT THE SOUTH.

DURING the last six months from January 1 to the end of June the MANUFACTURERS RECORD published 33,282 concise statements relative to Southern industrial developments, building enterprises and railroad and financial operations in the South and Southwest. This is a slightly larger number than for the same period of 1913, notwithstanding the inactivity in general business conditions, showing that the South is in this respect doing relatively more in construction work probably than any other section.

Comparing the number of items relating to various enterprises with the same period last year, it is especially noticeable that there has been a very large increase in the number of news items in regard to the building of bridges and culverts, to road and street work, sewer construction and to schools. There has also been an exceptionally large increase in the number of inquiries received for machinery and supplies wanted. In this department there was an increase from 3900 during the first six months of last year to 3895 during the same time this year, a gain of 595. There was an increase of 315 in the number of items about new securities to be issued, the total number being 2757, as compared with 2442 last year. These new securities were very largely in connection with municipal improvements and road work, and this is again illustrated in the fact that during the last six months there was an increase in the number of items published compared with last year of 242 as relates to school buildings,

351 about road and street work, 146 about sewer construction, and 204 about bridges, culverts and viaducts. These are the items which show the heaviest increase, and next to these comes a gain in gas and oil enterprises and in Government and State work.

But for the remarkable increase made in these Construction Department reports relating to the issuing of State and municipal securities, State and municipal school and road and sewer building activities, there would have been a very large decrease in the number of items published as compared with last year. There was a decrease of 328, or more than 30 per cent., in the number of items about railroads, showing how the inability of railroads to secure the capital needed for expansion is halting their construction activities. There was a decrease of 235 in the number of corporations organized, or more than 20 per cent.; a decrease of 144 in the items relating to the erection of stores; a falling off of 139 in the items relating to lumber manufacturing, and a considerable decrease in the number of other industrial activities.

Thus while the aggregate number of items, by reason of the great activity in road and municipal improvements, is larger than for the same time last year, there was a decrease in many other lines of industrial and construction activities. It is fortunate that throughout the South there is such widespread activity in the building of roads, in the establishment of sewerage systems and water-works, in the betterment of streets and in the erection of public buildings, especially schools. These things are indicative of the increasing wealth of the South and of a realization on the part of this section of the wisdom of using this wealth in making improvements of this kind. With the return of business activity there is the assurance that this wealth will be turned very largely into investment enterprises and bring about a broader advance in all lines of construction work than the South has ever had.

In the 33,000 items relating to building and construction activities throughout the South during the last six months were potentialities for the creation of business which offered a wide field for every intelligent, energetic business house, whatever might be the line of work covered. Here are opportunities for the printer and the engraver, for every one of these new enterprises meant stationery. Here are opportunities for engineers and contractors, for a large proportion of these enterprises need engineering skill and the ability of contractors to handle enterprises large and small. Here are opportunities for manufacturers of every line of machinery from that intended for the canning of fruits and vegetables to that for operating coal mines and steel plants, for constructing irrigating systems, for draining lands; the equipment needed for a wide variety of woodworking plants, for cotton mills, for telephones, for water-works and other industrial activities. Here are opportunities for building and equipping apartment-houses and office and bank buildings, for churches and public structures, court-houses, Government and State buildings, railway stations, schools, stores, theaters and warehouses. Every enterprise of this kind meant a new buyer for all of the wide variety of things which enter into construction work and the furnishing and equipping of such buildings. Here were opportunities for insurance companies, for bonding companies to guarantee the fulfillment of contracts; opportunities for those who build churches, as well as those who build the pews and pulpits for them; opportunities for the builder of fireproof vaults, for the equipment of office and bank buildings, and for the massive machinery needed in great hydro-electric developments.

Practically all the wide range of human business activities were represented in these more than 33,000 items published during the last six months. Here was a treasure-house from which men of energy and activity could bring forth treasures of business with which to enlarge their operations and enrich themselves. Those who failed to intelligently utilize the opportunities presented in these varied items as found in the Construction Department and in the Daily Bulletin of the MANUFACTURERS RECORD are missing a great opportunity. It is essential that a campaign based on information of this kind should be intelligently followed with initiative and with great care to make the best of the situation. Some people leave to the routine of office-boy work the following up of news of this kind. They fail to get

the results that are possible. Others follow this up with great skill, and ever find this a constant source of increasing business and profit. The number of items mentioned in our Construction Department for the period under review was as follows:

	June, 1914.	INDUSTRIAL AND DEVELOPMENTAL.	
		Totals, Six Months, 1914.	Totals for Corresponding Six Months, 1913.
Bridges, culverts, viaducts.....	97	587	383
Canning and packing plants.....	12	137	161
Clayworking plants.....	13	59	139
Coal mines and coke ovens.....	23	227	251
Concrete and cement plants.....	6	39	48
Cotton compresses and gins.....	45	179	192
Cottonseed oil mills.....	21	103	102
Drainage systems.....	26	147	169
Electric plants.....	79	712	650
Fertilizer factories.....	13	89	73
Flour, feed and meal mills.....	25	160	111
Foundry and machine plants.....	34	237	241
Gas and oil enterprises.....	119	963	692
Ice and cold storage plants.....	28	347	293
Iron and steel plants.....	3	11	34
Irrigation systems.....	2	29	*
Land developments.....	54	522	598
Lumber manufacturing.....	61	461	609
Metalworking plants.....	5	55	80
Mining.....	37	250	315
Miscellaneous construction.....	58	315	257
Miscellaneous enterprises.....	104	745	691
Miscellaneous factories.....	154	1,191	1,221
Motors and garages.....	31	254	277
Railway shops, terminals, round-houses, etc.....	15	47	87
Road and street work.....	212	1,617	1,296
Sewer construction.....	68	576	430
Telephone systems.....	25	184	175
Textile mills.....	31	232	230
Water-power developments.....	12	90	126
Water-works.....	94	678	589
Woodworking plants.....	44	327	289

BUILDINGS.			
Apartment-houses.....	119	863	934
Association and fraternal.....	46	278	336
Bank and office.....	101	720	652
Churches.....	121	824	787
City and county.....	73	592	458
Courthouses.....	12	141	166
Dwellings.....	449	3,216	3,239
Government and State.....	54	255	192
Hotels.....	51	418	438
Miscellaneous.....	84	585	571
Railway stations, sheds, etc.....	27	330	391
Schools.....	327	1,530	1,318
Stores.....	257	1,699	1,843
Theatres.....	36	232	204
Warehouses.....	69	404	384

RAILROAD CONSTRUCTION.			
Railways.....	90	715	1,043
Street railways.....	28	172	165

FINANCIAL.			
Corporations.....	123	914	1,149
New securities.....	356	2,757	2,442
Fire damage, etc.....	3,996	28,096	27,376
Machinery, proposals and supplies wanted.....	132	1,291	1,418
Totals.....	559	3,895	3,390
Totals.....	4,687	33,282	32,094

*Irrigation included under Drainage in 1913.

THE RIGHT TO DISCUSS FREELY BUSINESS CONDITIONS.

HERE and there a few industries are to be found which, by reason of particular conditions, are very busy. Some of them are busier than ever before, but these interests are not sufficiently broad in extent to affect the general welfare of the country. That the fundamental industries, such as iron and steel and coal and lumber, are greatly depressed every intelligent business man knows. That there is no spirit of enthusiasm to dare and to do great things in constructive work throughout the land is easily seen.

Business men who are suffering from present conditions, laborers out of employment, and others who know by their own experience that business is not good, will begin to question the accuracy of all statements made in or out of Congress to the contrary when their own personal knowledge compels them to see that business is not prosperous. Prosperity cannot be created by promises, nor by the continued repetition of the statement that prosperity exists, when, as a matter of fact, it does not exist. We cannot think ourselves into prosperity; we cannot think the country into broad material development, and we cannot fool the public—at least all of the public all of the time.

If public men would frankly admit that business is bad and that many men are out of employment, but take the ground that this has come about by natural conditions and not wholly by legislative activities, a much more plausible argument could be advanced than those which are now being put forth, and the argument would have some foundation of fact in it. It is perfectly proper to base an expectation of improved business upon the magnifi-

cent crops which nature promises us. It is perfectly proper to say that the new currency system, when in full working order, should be of material assistance in helping the business interests of the country. But no greater mistake can be made than to insist that business conditions are good, and to criticize everybody who tries to arouse an interest throughout the country in lessening the legislative activity in Washington. This legislative activity is not purely a product of this administration. We have had too much legislation for years. The Legislative Factory—or, as someone has called it, the Conversation Factory—at Washington has been running overtime. The country would be better off with less legislation in national, State and city affairs.

The time has not yet come in the United States when men cannot discuss the conditions of business; when they cannot fight for or against tariff legislation; when they cannot present their views to Congress through letters or otherwise, or seek to arouse an interest throughout the land in the views which they hold. Lobbying, bad as much of it is, and especially corrupt when that lobbying takes the form of improper influence, has its evils, but it is proper that all phases of the effort to awaken public sentiment on any particular subject should be given a fair study. Had the Carnegie Fund spent \$30,000 to defeat the Panama tolls act, it would have been bitterly assailed not only in Washington, but throughout the land by those who supported the bill for the repeal of tolls. It would have been charged with rank lobbyism, and the country would have been warned of the real danger ever present of an organization of this kind, which, with a vast income, can undertake to influence legislation. But since it so happened that the Carnegie Fund spent its \$30,000 in distributing literature in favor of the repeal of the exemption of American coastwise shipping from all tolls, this criticism was not made by those who would have made it if conditions had been reversed. A business man, however, who attempts to let the country know that business conditions are not good, and who urges this or that legislative action, is liable to be pilloried before the country as though he had no right to make known his views and to urge others to join him in opposing legislation.

J. W. McMillan, president of the Milledgeville Brick Works, Milledgeville, Ga., states the case very clearly in a letter to the Wall Street Journal, in which he says:

It's my opinion, if the members of Congress, the Senate and the President were to give the same amount of energy and time to making laws to help citizens to get rich as they are doing and have done to keep folks from becoming rich, prosperity would stay with us.

No doubt but their intentions are good, but the results, so far, spell partial paralysis.

The motto of Georgia is good—"Wisdom, Justice, Moderation." It should be writ in large letters and a copy laid before each lawmaker at Washington.

Unfortunately, the theory of the day in Congress is that men must not get rich. Money making has come to be a crime—when it is made by someone else.

A \$30,000 Plant Completed.

Architectural wood supplies from Florida timber is the product of the Campbell-Ware Company of Jacksonville, which now has in operation its recently-completed plant. This company is capitalized at \$50,000, and has invested about \$30,000 for its buildings and machinery. Its machinery-room is of brick construction, 104 feet long by 70 feet wide, with automatic closing firedoors, six-inch concrete floors and sawtooth roof. Each machine is driven by individual electric motor, using electricity from local transmission system. The sorting-room is 104x70 feet in size, built of iron-clad wood frame, with plank floor and sawtooth roof. Officers of the Campbell-Ware Company are as follows: A. B. Campbell, president; W. S. Ware, vice-president-treasurer; A. B. Campbell, Jr., secretary.

Dr. G. S. Fraps, State chemist, Agricultural and Mechanical College of Texas, College Station, Tex., writes to the MANUFACTURERS RECORD that the quantity of fertilizer sold in Texas from September 1, 1913, to May 1, 1914, was 77,400 tons. The quantity sold last year was 75,500 tons.

A Triumph in Municipal Improvements

NOTABLE EFFICIENCY IN REPAVING TWO OF THE PRINCIPAL THOROUGHFARES OF BALTIMORE.

By ALBERT PRENIS.

Very interesting, very impressive, even to the man in the street, is the visible sample of Baltimore's complete paving rehabilitation furnished by the work under way on the two extremely busy streets of Baltimore and Howard. Baltimore street is being entirely reconcreted and repaved from Harrison street to Fremont avenue, and entirely relaid with a double track of street railway. Howard street is being entirely repaved from Baltimore to Cathedral street, and the railway tracks are being partly relaid where the rails were not up to

responsible for the entire good nature in the attitude of everyone, the public, workmen and all, toward the minor inconveniences the torn-up conditions entail.

The work is walking right along, and the expertness with which it is being handled is greatly conducive to patience. The first section of the Baltimore street work extends from Harrison street to Liberty. Beginning in May, the contractor had 80 days to complete the job. One side of the street is taken at a time, and much heavy work has been done at night, both here and else-

as it is. The lack of friction and disturbance to business which has been seen is all the more gratifying to the authorities and the public as well.

It is difficult to dip into any part of the tremendous upheaval that is lifting Baltimore into eminence right now and confine one's comments to a single section of the great work in hand. For the first time in the history of the world a city of more than half a million people is starting in to repave every street and alley in its bounds, to install an entirely new and complete sewerage system and to put all the wires into an underground municipally-owned conduit system. A greatly extended water-works system, a comprehensive park and boulevard system and dock and harbor improvement plans, the cost of all footing up \$100,000,000 or more, are some of the evidences of a robust realization by Baltimore people that the time has arrived to equip Baltimore to seize and hold her rightful place as the



MERRIMAN RAILROAD ASPHALT PLANT OF UNION PAVING CO. AT WORK IN BALTIMORE.



TEXACO ASPHALT AS DELIVERED BY AUTO-TRUCK FROM UNION PAVING CO.'S PLANT.



SPECIAL WORK BY THE UNITED RAILWAYS COMPANY AT HOWARD AND FAYETTE STREETS, BALTIMORE. PREPARING COMPLICATED SWITCHES FOR THE REPAVING OF THE IMPORTANT THOROUGHFARE.



LOOKING WEST ON BALTIMORE STREET FROM CENTER MARKET SPACE. REPAVING OF SOUTH SIDE OF THE STREET COMPLETED AND WORK BEGUN ON THE NORTH SIDE.

the new standard of 125½ pounds. All of the track in the district has been concreted between the ties and six inches beneath them, in accordance with new Paving Commission requirements. All this is being done without serious interruption either to street car or to other traffic, and with so little inconvenience to passengers, pedestrians or merchants along those streets that the Commission has received no complaints regarding the Baltimore street situation and only one from a merchant on Howard street, and that related only to the disposition of some building material. The work has been expedited and handled in a competent manner by everyone concerned, who are chiefly the Paving Commission, the United Railways Co. and the contractors. Anyone can discover this at a glance. And doubtless it is the realization that everybody is doing the best he can, and that this best is a very high degree of efficiency, that is

where, by contractor and street railway alike. There has been no stoppage of traffic on Baltimore street and no blocking of street crossings. The south side of the street has been completely paved from Harrison to Liberty, and work on the north side is now well under way. At the present rate, it will be finished before the middle of July. The second section of the Baltimore street work, between Liberty and Fremont, has not been started yet, but it will doubtless be completed in time for the centennial celebration in September. The Howard street job will also be finished ahead of time—probably from the 10th to the middle of July.

There was apprehension and uneasiness on the part of the commission and its engineers as to the disorganization and interference with traffic that these improvements might cause, and particularly was this the case as to Baltimore street, so narrow and so much traveled

premier commercial and industrial city of the South, the most convenient shipping port for nearly half a continent, and the most enticing place of residence the country contains. Not all the people of Baltimore realize that elements are combining to irresistibly sweep the city on to a new and greater destiny, nor do those on the outside at all appreciate that Baltimore has now become permeated through and through with the same energizing forces that have revitalized the South and placed it well on its way toward leadership in trade and industry among all the countries on the globe.

It is an alluring theme to one who investigates, and in its proper treatment tomes may well be written. It is a subject which must receive increasing attention from writers and speakers of every sort, for in the aggregate and in detail it is one of the most interesting facts in the story of the nation's expanse. It is the story of an

old city, a city of great historic interest and unfailing charm, a city of achievement and many-sided leadership, adjusting itself to new conditions in the country, just as the South is, after many years, now ready to go forward as she would have been in shape to do a half a century ago had not the paralysis of war stunned and benumbed it, while at the same time the resistless forces of national development were turned into more available though less prolific sections of the Union, in the East, North and West.

In Baltimore is reflected the vigor and the strength of the South of today. It is as if a reservoir of vitality and energy had been slowly filling all these years, until now, with well-stored strength and well-rounded equipment for advance, Baltimore is wholly prepared to move well out into the national field, a vigorous contender for high honors and an embodiment of everything that is up to date in municipal affairs. Every preparation has been laid along broad lines, and in the light of all previous experience in city building and equipment, so that Baltimore may well claim to represent the latest word in municipal upbuilding.

So in this item of street and car-track work, features are found which constitute an innovation, and throughout it is an embodiment of all that is latest and best in such construction. Though forming but a small part of the work in Baltimore as a whole, it is conspicuous and it is typical. It represents the spirit shown in Baltimore's preparations to become a real world city.

According to the plans matured by the Paving Commission, which has in hand the laying of modern pavement on every street and alley in the city, the work of paving is not to begin on any street until all sewers and water mains are laid and connections made, and all conduits put down. When once laid, no pavement can be disturbed for five years, and no permit will be issued to dig into the street for any purpose. This affects the street-car company as well as property-owners along the streets, so the United Railways is anticipating its needs for many years to come. In every street that is being paved it is repairing or relaying its tracks, in each case working just ahead of the pavers, and in no case interfering with the running of its cars or retarding the work of the paving forces.

How difficult a task this is can hardly be appreciated, even by those who stop to watch the gangs of workmen. On Baltimore street, where the double track is being re-laid entire, there is a headway of 20 seconds, meaning there is about 20 seconds between cars during the day. Thus a gang can work only about 10 seconds on an average without interference on one or the other of the tracks. All the old concreting between the tracks, all the old ties and all the old rails have been removed, new ties laid, new rails laid, spiked, joined by plates which are riveted, the rails then being welded; crushed stone of special size is tamped for grouting between the ties and for six inches beneath them, and a concrete mixture is poured from a grout mixer that travels alongside the track. This work, together with the laying of an imported English scoria brick between the tracks and as a runner on the outside of the tracks, is done by the United Railways, and how it has been able to do this work without material or hardly perceptible interference with traffic is well-nigh a marvel.

Embedding the track on and in concrete without paralyzing traffic never has been undertaken anywhere in the country before. The customary plan is to entirely remove the car tracks when such work has been undertaken. The Baltimore plan, worked out by the Paving Commission, is to dig out the old concrete between the tracks and the earth beneath the ties, allowing them to rest on supports at each end of the tie. With crushed rock of specified size the tamping beneath the ties is of easy accomplishment, and service is uninterrupted.

Every modern device has been adopted by the United Railways Co., without reference to cost, if improved efficiency were to be obtained. The rails are secured with a screw spike, instead of being driven. Small holes are bored in the ties before laying and the screw spikes are sent home by an electrical device, the electricity being obtained by forming a current between the trolley wires and the track with a fish-pole arrangement, as also is the electricity for riveting the fish plates and for "thermit" welding the rail joints. By these altogether up-to-date means there is no hammering required in the tracklaying operations, and the people on the street are spared the deafening clatter that formerly accompanied all street-railway improvements.

An interesting feature of the street-railway operations is the "special work," as the frogs and crossing pieces are called. At Howard and Fayette streets there is a

perfect network of such special work, the like of which is probably seen nowhere outside of Baltimore. Here are two lines of track running north and south and two east and west. On three corners double tracks turn out and on the fourth corner one track turns out, so there are four crossings and seven switches at this location.

The contractor for the Howard street paving work is the Baltimore Asphalt Block & Tile Co. Sheet asphalt is the material being laid. The amount of the contract is \$65,000. On account of the large number of car lines and general traffic on this street, and because of the great difficulties foreseen in carrying out the work, the Baltimore Asphalt Block & Tile Co. was the only contractor who bid on the work. Apparently none other cared to tackle the job. So thoroughly qualified is the successful bidder for doing the work that it is being finished in the finest kind of shape without interfering with traffic and ahead of schedule time.

Both sections of the Baltimore street paving contract were let to the Union Paving Co. of Schenectady, N. Y., in a description of whose operations "celerity" does not appear to be a misfit word. Chas. D. Beckwith, the president, is here in person. He seems to have "lit all spraddled out," for he hadn't been in town 30 days till he had machinery and plants all over the city and had contracts on 21 streets, half of which were well on toward completion. Everything he owns is on wheels. He has a railroad asphalt plant, which he switched onto a convenient siding and turned on the steam. He swings asphalt and cement from cars to his plant and delivers hot asphalt onto a job with auto-trucks. The contractor gets the old rock from a street job, and this Beckwith hauls to his rock crusher in other auto-trucks. The crusher makes rock for concreting and also turns out smaller sizes for topping and for sand. Heavy portable self-propelling mixers turn out concrete at the paving jobs, and a small self-propelling mixer works on concrete curbing at the rate of 400 or 500 yards a day. The rollers for the asphalt work have a special steering device, which enables the engineer to dodge around the street cars and do quick work without interference with the traffic.

For opening new streets the equipment includes a steam shovel, running on rollers, that handles a yard of dirt every 30 seconds.

Developments in the Birmingham District.

[Special Correspondence Manufacturers Record.]

Birmingham, Ala., June 27.

Sales of pig-iron for the month of June will approximate 300,000 tons, as against a make of about 150,000 tons, reducing the quantity on the yards more than 100,000 tons. During the past week sales were not so heavy as the three weeks preceding, a quiet coming that was not entirely expected by furnace interests. All companies sold some iron in the week just closed, but none of the orders were large ones, buyers taking in small quantities. The price as quoted last week still prevails, \$10.25 for third quarter delivery and \$10.50 for fourth quarter delivery. No No. 2 foundry iron has been sold for \$11, and it is the general belief that the prices quoted above will remain for some time, although a brisk buying will cause prices to go higher.

A sale of 1000 tons of pig-iron for Genoa, Italy, is reported, and this will be shipped from stock on yards. The output of the iron will be increased by the addition of a new stack of the Woodward Iron Co., which went into blast this week. Another furnace of the same company will go in early in July, making the increase nearly 1000 tons a day.

The old material market is still very quiet, few demands and small sales reported by dealers who have a large stock on their yards. Dealers can see little prospect for any better market in the immediate future, but hope that sharp buying of pig-iron will create a demand for old material.

The cast-iron pipe market still remains about as reported, no large orders, but small orders that keep the plants working on practically full time. Some interests have sold considerable pipe, but not in large quantities, and shipments the past week have been fairly good. It is not expected that at this time of the year there will be heavy orders placed with any of the pipe companies.

The Superior pipe plant under construction at Bessemer for the past three months is nearly ready to begin operations, and will begin work, it is stated, with 150 men. Experienced men are arriving every day to work at this plant, that will make soil pipe, sizes from two to four inches, with all kinds of fittings. While the new

company has not gone out after any business yet, it has received a number of good orders that will be filled as soon as work commences, which will be within the next few days. The officials of the company are gratified at the outlook for successful business from the starting of the plant.

Alabama produced in May 151,000 tons of pig-iron, and 35,000 tons was turned into steel products manufactured at home. This tonnage, with the pig-iron made into water pipe and castings, consumed 60 per cent. of the output made in the State, leaving only about 60,000 tons for market outside of the Birmingham district. Birmingham iron goes into wider territory than any other iron district in the United States, for sales are made in Austria, Italy and England, while Ensley is shipping steel rails to China. Ensley rails are on Mexican, Costa Rican and Brazilian railroads, Birmingham and Bessemer water pipe lies in mains in Honolulu and Copenhagen, sugar-mill machinery goes from the district to Porto Rico, Cuba and Mexico. Birmingham iron is used on the Panama Canal, in Vancouver and in Nova Scotia, the distance the shipments go being far wider in extent than in any district north.

R. C. Megargel, president and promoter of the Gulf, Florida & Alabama Railroad, and a party of 15 Eastern capitalists who are financing the building of the road have been in Alabama this week, going over the road completed. The intention is to build the road into the mining district from the terminus built 110 miles from Pensacola, Fla. Mr. Megargel stated that by December 1 through schedules would be operated from Birmingham to Pensacola over the Southern Railway and the Gulf, Florida & Alabama via Kimbrough, on the Mobile & Ohio south of Selma.

Forty miles of the extension is now under construction, and work will be pushed rapidly through a virgin section of Alabama, and when completed will do a heavy business locally as well as having a direct line from the mineral district to the Gulf. The Louisville & Nashville is the only road now that runs from Birmingham to Pensacola. Just what route will be followed into the mineral district has not yet been announced, but a number of good towns are asking that the line pass through their corporations.

An Artist in Furniture Making.

At Tryon, N. C., there is a furniture factory owned by a man, who, instead of making furniture for a living, lives to make furniture. The man is Ralph C. Erskine. The factory is known in all its literature as "The Mountain Shop," and is turning out some of the most artistic and highest grade of furniture that the finest quality of material and the most skilled workmanship, guided by a furniture artist, can produce.

It is worth going through the shop to see how Mr. Erskine, a college graduate, pets and pats each piece of fine furniture, as though it were a child, and, indeed, it is a child of his artistic fancy, his brain, and the money that he is putting into its making. The shop and the furniture are just a little unlike anything else which the writer has ever seen.

Nestled in the foothills of one of North Carolina's glorious mountain ranges, on a stream which has been harnessed to provide the power, in a little cove encircled by tree-covered hills, there has grown up this shop, which is becoming known far and wide as the work of an artist in furniture building.

The old story of a saw-maker whose product had won the gold medal at a world's fair, when in telling how he had made this saw a thing of beauty, said that he "worked on it until he could feel his very life going into it," finds an apt illustration in the work of Ralph Erskine. He touches the furniture that his shop has produced as though into every piece of it he had put his very life, and this spirit pervades the shop and makes the men who are in it feel that they must put their very lives into it if they would produce results and win the commendation of the man who lives to make furniture, and who does not have to make furniture for a living.

A \$425,000 Coal Company.

Capitalized at \$425,000, the Kentucky-Henderson Coal Co. has been incorporated for the purpose of developing Kentucky Coal properties by J. A. Curtis, L. C. Mizer and W. H. Hill, all of 1137 Schofield Building, Cleveland, O. Mr. Curtis will soon announce development details.

Building Mississippi River Levees by Machinery



WHILE levee building has been carried on very extensively in the Mississippi Valley for more than one hundred years, still but little progress has been made in the methods of moving dirt. Originally the only method was by means of the wheelbarrow; in later years this method was supplanted by the drag scraper, and then later by the wheel scraper. Several efforts have been made to adapt machinery to this work and a number of contractors have "gone broke" making experiments, but it seems now that modern methods and modern machinery will at last be applied to this important work. A machine has just been perfected by the firm of R. H. & G. A. McWilliams, operating near Memphis, Tenn., that promises to greatly reduce the cost of constructing levees on the Mississippi. Their machine consists of two towers, with a slack cable-way stretched between them, and a steel bucket with a capacity of $4\frac{1}{2}$ cubic yards operating upon the cable by means of engine and windlass. The bucket, when full, is dragged over the ground to the dumping place on the levee, and carried back by the cable-way when empty.

The borrow pit between the two towers varies from 400 to 1000 feet. The towers are mounted on tracks and moved forward as each section is completed, thus enabling a wide, shallow borrow pit to be utilized.

The machine has been working about 30 days now, and is putting about 1200 cubic yards in place per day. It requires about three men to operate it, and takes the place of a forty-team outfit. If machines similar to this could be installed all along the line and work could be pushed rapidly both night and day, a great deal could be accomplished towards completing the great Mississippi River levee system.

It is estimated by the Mississippi River Commission that there are still about 200,000,000 cubic yards to be put in place, and while all of the money is not available to do this work, still Congress is being urged to provide as large an amount as possible each year during the next five years so that the work can be rushed rapidly to completion. The river and harbor bill this year carries an appropriation of \$8,000,000 for the Lower Mississippi River work and about \$4,000,000 of it is to be devoted to levee construction. If Congress will be as liberal during the next two or three years as it has been this year towards the Mississippi River, the great levee problem will soon be solved, it is believed by experts.

The vital task of the levee system in the Mississippi is demonstrated by certain facts. From Cape Girardeau, Mo., to the Gulf of Mexico the Mississippi River winds 1060 miles through a great level plain 550 miles in length and with an average width of 50 miles, which has been built up during the centuries of the alluvium of the river. At the same time, in depositing this alluvium, the river in its lower stretches has contributed much toward the construction of its own levees, so that lands of the basins on either side of it are much higher near its banks than at the edges farthest away from the river. Consequently the drainage of these basins is generally away from the Mississippi and toward such tributaries flowing parallel with it for miles, as the St. Francis, the Yazoo and the Tensas.

Under normal conditions the Mississippi is capable of carrying off the surplus waters entering it at Cairo. But the rapid development of the valley has created abnormal conditions which cannot be met by natural drainage, and has called for the construction of the artificial levees. The total length of their parallel lines is now 1538 miles, and they protect from overflow about 20,000,000 acres in six States. Of that area 16,000,000 acres, it is estimated, are reclaimable for productive agriculture. These are a few facts set forth in an artistic brochure, "Mississippi River Flood Problem," by John A. Fox, published by the Mississippi River Levee Association, which emphasizes the national character of the problem in these words:

"The flood problem on the Lower Mississippi River stands out distinct and unique among similar problems elsewhere throughout Christendom.

"First: Because of the extensive area damaged. The floods that affect the Lower Mississippi River cover an area as great as the combined areas of



1.—Tower on lower end of borrow pit. 2.—Showing a tower mounted on a movable truck, which is anchored when in use. 3.—Excavating bucket traveling with its load of $4\frac{1}{2}$ cubic yards of earth toward the embankment, a trip every two minutes. 4.—Looking toward the levee in course of construction. 5.—The excavating bucket dumping its load.

Vermont, New Hampshire, New Jersey and Connecticut—29,000 square miles. When the levees gave way in 1912 more than 12,000 square miles of this valley were inundated, an area as great as the area of Switzerland.

"Second: Because the damage incurred is caused by the waters from a territory entirely outside of the States whose land is involved. Of the water that damages the Lower Mississippi Valley region, less than 1 per cent. comes from the States damaged by these floods.

"Third: Because of the magnitude of the problem,

it can justly and rightly lay claim to be a national enterprise, there being 31 States, or nearly half the territory of the United States, involved.

"Fourth: Because of the duration of the floods that affect this part of the country. When the waters break through the levees in this region they remain upon the land from the first of April until the middle of June.

"Fifth: Because the magnitude of the undertaking is such that the nation alone can cope with it, and because so great a part of the nation is injured that the whole nation is affected."

Petroleum Production in the United States in 1912 and 1913

Eight days after the close of the year 1913 the United States Geological Survey published a very close estimate of the total production of oil in the United States, giving the product of each State. This estimate was prepared from pipe-line runs, supplemented by many statements from smaller concerns.

The Survey now in June follows this statement by giving the results of a complete canvass of the United States, including also the shipments by tank cars and shipments from oil wells direct to refineries without entering any trunk lines. This canvass involved a complete system of inquiries directed to every petroleum producer in the United States and was entirely independent of the pipe-line inquiries. A similar canvass is made each year.

These results are published in the table below. While they agree substantially with the statement of production at the beginning of the year, differing by only 2.5 per cent., the canvass has been necessary, not only to check the accuracy of the January estimate, but because without it the estimate made at the end of

the following year would be much less exact and possess little value.

These complete results show an even greater gain from 1912 than was forecast by the estimate, the total production being 248,446,230 barrels, against 222,935,044 barrels in the previous year.

No effort is made by any statistical agency, except the Federal Survey, to publish a statement of the total value of the crude petroleum at the wells. In 1912 this value amounted to \$164,213,247, or an average of 73.7 cents a barrel.

The feature of paramount interest for 1913 was the enormous increase in this value to \$237,121,388, or 95.4 cents a barrel. Thus the gain in barrels was less than 25,000,000 (25,511,186), while the gain in value was almost \$73,000,000 (\$72,908,141).

The output increased more than 11 per cent., while the value increased four times that percentage, or 44.40 per cent. Every State except Colorado showed an increase in the value of the oil. Every field showed a gain in value, the lowest gain being 15.25 per cent. in

California, and the highest 78.28 per cent. in the Mid-Continent region.

STANDING ON ITS UPPERS.

Results of Diversified Farming in a Leading County of Georgia.

Illustrative of the beneficial results from diversified farming are some facts set forth by E. Y. Clarke, general secretary of the Brooks County Industrial Club, Quitman, Ga., in a letter to the MANUFACTURERS RECORD. He says:

"This county not only produces its entire corn and meat supply, but this year will, in addition, ship out several hundred thousand pounds of ham and bacon. For several years the county has planted one-third more acreage in corn than in cotton, and this year they are shipping about 750 carloads of watermelons and have shipped about 75 carloads of cucumbers. Quitman is a small town practically run by the farmers of Brooks county. One citizen of Brooks county, who was formerly a large farmer, but who is now president of one of the town banks, related to me the fact that when he quit farming it took the merchants to whom he had been delivering farm products on the basis of trading same out at their store nearly five years to pay him what they owed. A reference to the books of the merchants of this county will show that in probably 60 per cent. of the instances the merchants owe the farmer. I doubt very much if there is another county in the South where such conditions exist."

Florida Citrus Fruits in England.

An inquiry has been received by Vice-Consul William Force Stead, Liverpool, as to the market in that district for Florida oranges and grapefruit. An investigation of local conditions has been made, says Daily Consular and Trade Reports, and a large firm dealing in fruits of all kinds states that the grapefruit trade is steadily growing in England, and is capable of being still further developed, as it has not yet become an article of general consumption, and is at present stocked only by the highest class of fruit dealers. Current prices cannot be given, as no grapefruit is on the market at present.

With regard to Florida oranges, it is believed that the demand would be good, but the price might not be very satisfactory, because of the great quantity of Valencia and Jaffa oranges, both of which are on the market at the same time. A prominent firm states that if Florida oranges could be brought here in September and October and the first week or so of November they have no doubt but that satisfactory prices could be realized.

With respect to the prices of Florida oranges, it would be difficult to say anything which would be of value, the prices depending upon the varying conditions of the supply and demand, and the state of the fruit upon arrival. The latest published prices of oranges sold at auction in Liverpool May 11 were as follows per case:

Valencia III to I (420), \$2.26 to \$3.40; Valencia (large 420), \$2.98 to \$4.19; Valencia (large 714), \$4.38 to \$5.34; Valencia (extra large 1064), \$5.59. Jaffa X to I, \$1.46 to \$2.61 per box.

The firm referred to will be glad to hear from the inquirer. The address may be had on application to the Bureau of Foreign and Domestic Commerce at Washington, D. C., and its branch offices.

Cotton Warehouses Costing \$300,000.

Preparations are being made to begin the construction of the buildings for the Merchants & Planters' Compress & Warehouse Co. at Galveston, a 720x640-foot area to be used, and it is now being graded. This company's buildings are to be of the latest type fireproof construction; reinforced concrete throughout; monolithic reinforced concrete walls separating compartments for cotton storage; metal skylights and windows; reinforced concrete fireproofs and windows designed by John R. Fordyce of Hot Springs, Ark., the engineer-architect for the buildings; separate compartments, each for 1000 bales cotton; storage shed for 75,000 bales; unloading sheds for 12,000 bales; automatic sprinkler system; electrical railway for handling cotton; buildings to cost about \$300,000. Contract for construction has been awarded to the Gilsonite Construction Co. of St. Louis, with V. H. Clarke in charge at Galveston. The Webb Press Co., Minden, La., is contractor for the compress equipment.

Comparative Statement of the Production and Value of Petroleum in the United States in 1912 and 1913.

State or region.	1912.			1913.			Increase.			Per cent. of increase.	
	Quantity (bbls.).	Value.	Average price per bbl.	Quantity (bbls.).	Value.	Average price per bbl.	Quantity (bbls.).	Value.	Quantity (bbls.).	Value.	
California	87,272,593	\$39,624,501	\$0.454	97,764,525	\$45,661,400	\$0.467	10,491,932	\$6,036,899	12.02	15.25	
Colorado	206,052	199,661	.973	188,799	174,779	.947	17,253	\$24,882	*8.37	*12.46	
Illinois	28,601,308	24,332,605	.851	23,893,899	30,971,910	1.296	*4,707,409	6,639,305	*16.45	27.23	
Indiana	970,009	885,975	.913	956,095	1,279,226	1.337	*13,914	393,251	*1.43	44.39	
Kansas	1,592,796	1,066,698	.688	2,375,029	2,248,283	.947	782,233	1,152,585	49.11	105.19	
Kentucky	484,368	424,842	.877	524,568	675,748	1.288	40,200	250,906	8.30	59.03	
Louisiana:											
Caddo	7,177,949	\$5,419,541	\$0.755	9,781,560	\$9,812,342	\$1.003	2,603,611	\$4,392,801	36.27	81.05	
Jennings	1,105,711	968,393	.876	780,648	769,917	.974	*315,063	*198,476	*28.49	*20.50	
Welch	22,140	18,655	.843	31,144	26,745	.859	9,004	8,090	40.67	53.37	
Anse la Butte	25,000	19,605	.784	6,612	5,290	.800	*18,388	*14,315	*73.55	*73.02	
Vinton	932,639	597,633	.641	1,888,864	1,641,637	.869	956,225	1,044,004	102.53	174.69	
Total	9,263,439	\$7,023,827	\$0.758	12,498,828	\$12,255,931	\$0.981	3,235,389	\$5,232,104	34.93	74.49	
New York	874,128	\$1,401,880	\$1.604	902,211	\$2,169,357	\$2.404	28,083	\$767,477	3.21	54.75	
Ohio:											
Southeastern	5,013,110	\$8,177,189	\$1.631	4,964,425	\$12,229,610	\$2.463	*48,685	\$4,052,421	*.97	49.56	
Lima	3,955,897	3,908,809	.988	3,817,043	5,308,842	1.391	*138,854	1,400,033	*3.51	35.82	
Total	8,969,007	\$12,085,998	\$1.347	8,781,468	\$17,538,452	\$1.997	*187,539	\$5,452,454	*2.09	45.11	
Oklahoma	51,427,071	\$34,672,604	\$0.674	63,579,384	\$59,581,948	\$0.937	12,152,313	\$24,909,344	23.63	71.83	
Pennsylvania	7,837,948	12,886,752	1.644	7,963,282	19,805,452	2.487	125,334	6,918,700	1.60	53.69	
Texas:											
Northern:											
Corsicana	233,282	\$149,393	\$0.640	158,830	\$156,844	\$0.987	*74,452	\$7,451	*31.92	3.19	
Henrietta	197,421	134,681	.682	344,868	342,783	.994	147,447	208,102	74.69	154.51	
Powell	251,240	193,439	.769	282,476	216,402	.766	31,236	22,963	12.43	11.87	
Electra	4,227,104	3,340,828	.790	8,131,624	8,142,797	1.001	3,904,520	4,801,969	92.37	143.73	
Marion county	362,870	290,974	.802	262,392	261,965	.998	*100,478	*29,009	*27.69	*9.96	
Other	3,612	3,511	.972	4,062	4,394	1.081	450	883	12.40	25.15	
Total	5,275,529	\$4,112,826	\$0.779	9,184,252	\$9,125,185	\$0.994	3,908,723	\$5,012,359	74.08	121.87	
Coastal:											
Baton	844,563	\$625,812	\$0.741	741,350	\$670,323	\$0.904	*103,213	\$44,511	*12.22	7.11	
Dayton	12,151	8,473	.697	13,329	10,633	.797	1,178	2,160	9.69	25.49	
Goose Creek	43,898	27,791	.633	249,641	206,311	.826	205,743	178,529	468.68	642.36	
Humble	1,829,923	1,313,229	.718	1,504,880	1,453,158	.965	*325,043	139,929	*17.76	10.65	
Matagorda county	613,292	406,032	.662	294,553	266,338	.904	*318,739	*139,694	*51.97	*34.40	
Orange county	.....	.....	.....	17,706	19,123	1.080	17,706	19,123	.....	.....
Saratoga	1,116,655	827,847	.741	937,720	855,935	.913	*178,935	28,068	*16.02	*3.39	
Sourlake	1,175,108	874,897	.745	1,348,053	1,350,379	1.000	172,945	475,482	14.72	54.34	
Spindletop	822,916	654,778	.796	716,374	716,993	1.000	*106,542	62,215	*12.95	9.50	
Other	1,022	1,028	1.000	1,620	1,215	.75	598	187	58.51	18.19	
Total	6,459,528	\$4,739,887	\$0.734	5,825,226	\$5,560,406	\$0.953	*634,302	\$810,521	*9.82	17.10	
Total Texas	11,735,057	\$8,852,713	\$0.754	15,009,478	\$14,675,593	\$0.978	3,274,421	\$5,822,880	27.90	65.78	
West Virginia	12,128,962	\$19,927,721	\$1.643	11,567,299	\$28,828,814	\$2.492	*561,663	\$8,901,093	*4.63	44.67	
Wyoming	1,572,306	798,470	.507	2,406,522	1,187,232	.493	834,216	388,762	53.06	48.69	
Other	.....	.....	.....	34,843	67,263	1.930	34,843	67,263	.....	.....
Total	222,935,044	\$164,213,247	\$0.737	248,446,230	\$237,121,388	\$0.954	25,511,186	\$72,908,141	11.44	44.40	
Summary.											
Appalachian	26,338,516	\$42,818,384	\$1.626	25,921,785	\$63,708,961	\$2.458	*416,731	\$20,890,597	*1.58	48.79	
Illinois and Indiana	4,925,906	4,794,784	.972	4,773,138	6,588,068	1.380	*152,768	1,793,284	*3.19	37.40	
Illinois	28,601,308	24,332,605	.851	23,893,899	30,971,910	1.296	*4,707,409	6,639,305	*16.45	27.23	
Mid-Continent	65,473,345	45,300,669	.692	84,920,225	80,767,758	.951	19,446,880	25,467,089	29.70	78.28	
Gulf	8,545,018	6,344,173	.742	8,542,494	7,993,997	.936	*2,524	1,650,824	*.03	26.02	
California	87,272,593	39,624,501	.454	97,764,525	45,661,400	.467	10,491,932	6,036,899	12.02	15.25	
Colorado and Wyoming	1,778,358	998,131	.561	2,595,321	1,362,011	.525	816,963	363,880	45.94	36.46	
Other	.....	.....	.....	34,843	67,263	1.930	34,843	67,263	.....	.....
Total	222,935,044	\$164,213,247	\$0.737	248,446,230	\$237,121,388	\$0.954	25,511,186	\$72,908,141	11.44	44.40	

aCalifornia production in 1913 subject to revision.

bIncludes Michigan in 1912.

cIncludes Alaska, Michigan, Missouri and New Mexico in 1913.

*Decrease.

Status of Employees of the Baldwin Locomotive Works

In his testimony last week before the United States Commission on Industrial Relations in Philadelphia, Alba B. Johnson, President of the Baldwin Locomotive Works, said that under normal business conditions his works employs from 17,500 to 19,500 men, but that under present "psychological" conditions only about 8200 men are employed. The normal weekly hours of labor are 55 for day men and 65 for night men. Under present conditions the day men are working but 40 hours and night men 39 hours per week. He testified that present wages are about 25 per cent. higher than those of 10 years ago. The nationality of employees, determined by actual count at a time when the total number on the roll was 16,211 men, was as follows:

Americans	8039	Irish	2345	Polanders	1418
Russians	1215	Germans	972	Austrians	753
Italians	693	English	289	Scotch	127
Swedes	57	Lithuanians	44	Greeks	32
French	29	Canadians	24	Danes	21
Swiss	21	Norwegians	18	Rumanians	17
Cubans	15	Slavs	12	Turks	11
Welsh	9	Hollanders	7	Mexicans	6
Spaniards	6	Armenians	5	Bohemians	5
Porto Ricans	4	Australians	3	Brazilians	3
Chinese	3	Columbians	3	East Indians	3
Persians	3	Fins	2		

Chileans, Montenegrans, Syrians, Venezuelans and Palestine, each 1.

Men are not discharged on account of old age, and the period of service ranges from one employee who has been 60 years in the service down.

The average weekly earnings per employee during the past 14 years have been as follows:

1900.....	\$12.32	1907.....	\$13.03
1901.....	12.32	1908.....	9.30
1902.....	12.16	1909.....	13.52
1903.....	12.42	1910.....	13.91
1904.....	11.97	1911.....	14.00
1905.....	13.03	1912.....	14.37
1906.....	12.91	1913.....	14.86

*Year of panic.

This shows an increase of approximately 20 per cent. in 10 years. The works maintains its own employment bureau and furnishes proper information to other employers as to the record of employees. It rarely asks other employers for records of applicants. The power of discharge is vested in the foreman. Appeal may be taken from his judgment to the general superintendent, to the vice-president or the president. Applicants for employment are not questioned as to membership in the labor organizations. Doubtless many employees retain their membership in trades-unions, but so long as this does not impair their efficiency as workmen, it does not affect their relations to the works.

There is no efficiency system or premium bonus system employed, but workmen are encouraged to make the highest wages possible upon the principle that the higher the output of the works, the lower is the overhead charge, the saving in which accrues to the employer.

Formerly a formal apprenticeship system was in operation and a considerable number of foremen, assistant foremen, heads of departments and leading men were derived from it. It has been discontinued, however, upon the ground that there is no value in the formality of an indenture, and that the relations of the employer with the learner are more natural and effective without indenture. Learners are taken from the principal universities, colleges and the public schools, as well as from many foreign nations.

The various processes are organized into contracts. A particular class of work is performed in a shop assigned to that work. Various divisions of the work therein are made the subject of separate contracts. Contractors are selected from the most capable and efficient workmen, who have shown ability to organize their work and produce a large output. Individual piece work is employed so far as the nature of the work permits. Contractors, piece workers and workmen alike are paid an hourly rate, which is fixed by the company, but when work is turned in as finally finished, any excess or deficiency over the piece-work rate as compared with the hour rates is charged or credited to the contractors as the case may be, and may or may not be distributed by him among his leading men, according to the circumstances of each particular contract. In each case men are employed and wages are paid by the company.

As the works are situated in the midst of a large city, welfare work such as is frequently practiced in isolated plants is unnecessary. At one time a restaurant was

started for the purpose of providing meals at cost to employees. A large lounging and smoking-room was also provided, with newspapers, periodicals, etc. At first, superintended by a capable manager, it proved unsatisfactory and was then managed by a committee of foremen. Owing to the various tastes and habits of different classes of workmen, the experiment proved a failure, and has not been retried in Philadelphia. At the Eddystone Works, however, which are isolated, a workmen's restaurant is successfully operated.

There was a strike of employees in the spring of 1911, but it was settled by the men returning to work.

An employees' beneficial association is maintained, the conditions of which are set forth in the following statement:

Any qualified employee of the Baldwin Locomotive Works may permit an agreed-upon percentage of his wages to remain upon deposit to his credit in the general office on the following terms:

1. To qualify as a depositor, an employee must obtain the approval of his foreman and the general superintendent.

2. This approval will be granted to employees of good character, in good standing, who have been in the company's employ at least 90 days. The company reserves the right to refuse any application or to close any deposit account at any time.

3. This deposit to bear interest at the rate of 3.65 per cent. per annum, and compounded every six months.

4. The employee agrees that per cent. shall be deducted from his wages and deposited to his credit, of which entry shall be made in a deposit book furnished him.

5. Deposits will be deducted from the weekly wages of the depositor and deposited to his credit, as shown on his weekly pay envelope, which shall be preserved by him.

6. A depositor may make such additional deposits from his wages as he may desire, by personally depositing the same with the treasurer at his office.

7. The deposit book shall be presented to the treasurer the first of each month, in order that wages deposited may be entered therein.

8. All or any part of such wages deposited to the credit of the employee may be withdrawn by him, with interest at 3.65 per cent., on demand, without notice, on presentation of his deposit book and the signing of a receipt for the same, under any of the following circumstances, to be certified to by his foreman and the general superintendent:

(a) When a depositor leaves the employ of the company, or is discharged, or is laid off on account of no work.

(b) When a doctor in good standing certifies to the illness of the depositor or a dependent member of the depositor's family.

(c) When such deposits may amount to \$100 they can be transferred to the general savings fund department and receive interest at the rate of 4 per cent. per annum.

(d) When the company elects to close the deposit account.

9. As a further encouragement to our workmen to deposit a portion of their earnings, to provide against sickness in their families, the Baldwin Locomotive Works will, upon recommendation of the foreman of the department in which the depositor is employed, and upon approval of the general superintendent, pay to such depositor who may be injured whilst on duty in the employment of the company, so long as he may be unable to do any work, but not for more than four weeks, fifty (50) per cent. of the average wages earned during the four weeks prior to his injury.

10. In case any depositor shall receive permanent injuries whilst on duty in the company's employ, such as the loss of an eye, a foot, a hand, an arm or a leg, such employee will receive compensation at a rate per hour, equal to the average rate earned per hour during the four weeks prior to the day the injury was received, so long as he remains in the employ of the Baldwin Locomotive Works, such employment to depend entirely upon his obedience to the rules and regulations governing employees.

11. In case of death from accident when on duty in the employ of the company, however caused, the Baldwin Locomotive Works will pay to the widow, children, parents of the deceased depositor, or to other persons entitled under the laws of Pennsylvania, a sum equal to 100 weeks' pay, based upon the average weekly pay received during the four weeks prior to the day the injury was received, but in no case shall the amount so paid exceed three thousand dollars, said beneficiaries signing a release of all further claims for said accidental death, at the time the payment is made.

12. Payments to depositors injured by accidents according to Sections 9 and 10 will not be deducted from the deposits of the depositor, but shall be a contribution by the company.

13. Upon receipt of payments under Sections 9, 10 and

11, the depositor agrees to sign papers releasing the Baldwin Locomotive Works from further liability.

14. A depositor who is laid off or discharged by the company, and whose deposit is not terminated by the company, may continue to make deposits and withdrawals as before, and will be given a preference so far as possible in re-employment over men who are not depositors, but such depositor will not receive any consideration for injuries sustained elsewhere than in the Baldwin Locomotive Works, or be accepted for re-employment after having been injured elsewhere.

The employees' share fund has 5530 members, and its deposits amount to \$220,000. From the time of its inauguration—June, 1911, until the end of 1913, interest had been paid to depositors amounting to \$17,000, and accident and death benefits had been paid amounting to \$36,000. The workmen contribute nothing whatever to these benefits, the mere fact of being depositors constituting membership in the association, and the entire amount of their deposits being placed to their credit. To employees who are not members of the Beneficial Association no accident or death allowances are made beyond what the company is legally liable for. Members of the Employees' Beneficial Association are given priority of employment when depression requires reduction of force, or when the force is increased.

The improvement of processes and the introduction of higher grade machinery has caused a reduction in the number of unskilled workmen and a corresponding increase in the skilled and highly paid men. The development of industrial enterprises has created a greater demand for highly skilled and highly developed men, and especially for capable foremen and administrators. The opportunities for advancement for young men are greater than they have ever before been.

The number of fatalities has been as follows:

1903.....	3	1909.....	3
1904.....	5	1910.....	5
1905.....	12	1911.....	11
1906.....	5	1912.....	11
1907.....	14	1913.....	2
1908.....	None		

These are generally found to average about 1 per 2000 men per annum. The percentage increases when a large number of raw men are being added to the force, and decreases when a reduction of force occurs and the more intelligent and skilled workmen are retained. The number of accidents per thousand employees has been as follows:

Sufficient to cause absence of not less than 1 or more than 14 days:	Per Thousand Men.
1911.....	23
1912.....	31
1913.....	39

Sufficient to cause absence of more than 14 days:

	Per Thousand Men.
1911.....	14
1912.....	23
1913.....	27

Serious accidents:

	Per Thousand Men.
1911.....	2.9
1912.....	4.2
1913.....	4.3

The witness testified that he endorsed the principle that the cost of accident and death indemnity should be borne by the product rather than by the families of the unfortunate, but that he favored the passage in Pennsylvania of a compulsory employer's liability bill, and believed that in the main the legislation which has been enacted for ameliorating the condition of labor has been effective to that end. He attributed the present unrest among workmen to envy of others apparently more fortunate than themselves, and the consequent desire to get rich quick, forgetting that the only legitimate path to success is by thrift, energy and capability.

To Amalgamate American Collieries

REPORTED AMBITION OF D. A. THOMAS, THE EXTENSIVE SOUTH WALES OPERATOR.

D. A. Thomas of Wales, probably the greatest operator in coal in the world, who has shown in recent trips to the United States deep personal interest in Southern coal fields, is reported by the London Times as stating that he has in view the amalgamation of American collieries, but that, although he hopes to bring that about, he could not go into particulars, as to do so would probably interfere altogether with the carrying through of his plans. In an interview in the Times he said that he thought the export of American coal was certain to increase largely, and perhaps would come more and more into competition with Welsh coal in South Amer-

ica. There was no reason, however, for alarm in South Wales at the present time, because the demand for Welsh coal was steadily increasing. At the same time the price of Welsh coal had risen to such a figure, owing to the great increase in wages and the increased expense which the obligations of Parliament had caused coal owners to incur, that there was today no more profit for the coal owner at, say, 20s. a ton than there was at half that price 25 years ago. Notwithstanding the increased shipments to places abroad of American coal during the last 12 months, the market in Cardiff was firmer than it was a year ago. A large part of the

supply of Cardiff coal had been contracted for last autumn for this year at about 18s., whereas the price today was about 20s.

The question of the future of American coal was very largely one of transportation. He believed that that was a matter which would be solved before long by the use of vessels having a larger tonnage. The growth of foreign trade in coal in America was largely a matter of cheaper transportation. He was not afraid of competition at the present time either from American or German coal, but he felt that it was going to increase in the future. The increased cost of coal in this country was very largely due to the increased cost of production. The low volatile West Virginia coal and that from New River and Pocahontas cost little more than what similar coal cost in South Wales. On the other hand, the cost of transportation to tidewater was five times what it was in South Wales, the distance inland being 200 to 300 miles. The selling price of run-of-mine coal at Newport News, Sewell's Point or Norfolk was equal to the cost of 80 per cent. Welsh small and 20 per cent. large, which would be the equivalent of run-of-mine coal in West Virginia. The production per man per annum in the United States was, roughly speaking, three to four times what it was in South Wales. This was largely due to physical conditions. In West Virginia mining consisted very largely of slope and drift propositions instead of shafts, and very little pit-roof was required. Electricity was allowed to be used right up to the face of the coal, and a very large proportion of the coal was got by cutting machines.

Over 4,000,000 tons of coal was exported from the United States last year over sea, besides the coal sent by land to Canada. The Americans had taken the West Indian market from us because they brought back iron ore as the return freight. The great advantage this country had in regard to coal exportation was that we imported as return freight heavy goods like iron ore, cotton, wheat, etc. If the Americans built boats sufficiently large, say boats carrying 15,000 tons, they might find it economical and practical to send them out in coal and bring them back in ballast. America had sent coal to the Egyptian railways, and by so doing had taken

away some of our coal trade there. That was a much higher volatile coal than steam coal; it contained over 30 per cent. of volatile matter. Then, again, the Consolidation Company, one of the largest concerns in America, with a production of about 12,000,000 tons, were at the present time shipping to three large markets. The French railways were taking American coal. A little while back the Barcelona Gas Co. took coal from America, and coal was also being shipped to Naples from America for the Cunard Company. A considerable quantity was being shipped to the depot at Dakar on the West African coast. Some was being shipped both to Buenos Ayres and Rio, and Messrs. Booth were shipping a considerable quantity to the Amazon.

The American Government were going to keep the coaling of the depots of the Panama Canal in their own hands. They realized that, especially in so far as it came into competition with the Suez Canal, that competition would depend largely on the cheapness of fuel in the canals. He had little doubt that American coal would be mainly used for the Panama Canal, and, possibly, through the canal, on the Pacific coast of North and South America. At San Francisco it would meet the competition of Canadian coal from Vancouver. Of course, oil was being largely substituted for coal in San Francisco, and the Californian oil field seemed to have reached its culminating point. Colonel Goethals, the chief constructor of the Panama Canal, had said that he would be able to get coal carried from Hampton Roads to Colon for 90 cents a ton. That would put Welsh coal out of competition at the depots there. The Panama Canal would mainly be dependent on the high-class low-volatile coal of West Virginia.

With regard to German competition, Mr. Thomas said South Wales had felt it on the coast of France and in the Mediterranean. The German coal was of lower quality, lower calorific power—in fact, there was no coal equal to the South Wales coal for steam-raising purposes. He was afraid, however, that he must admit that the Germans took more trouble in cleaning and sizing their coal.

supplied the price falls as the amount of goods manufactured supplies the demand.

There seems to be a Liverpool list of standards which some exchanges use.

I brought the matter of the department procuring a set of standards from the National Department to the attention of the board last December. I do not think that the North Carolina farmers are interested in each of the nine standards, but that four or five will cover North Carolina cotton. The samples are sold as a whole, or such as are desired can be bought separately.

This is a matter of importance to the farmers, and will add to his profits when properly arranged. He need not expect much aid from the cotton buyers in arranging this matter; they will have to work it out themselves until each bale of cotton will be an item.

In the meantime let us continue to urge the farmers to make the supplies for his farm and some to sell at home, and let it be his cotton and not someone's else that he is holding or selling.

BIG DREDGING AND FILLING CONTRACT

Preliminary to Beginning Construction of \$2,500,000 Cotton Warehouses.

A big contract for dredging and filling in the Mississippi River will soon be awarded by the Board of Commissioners of the Port of New Orleans, this contract to be preliminary to beginning the construction of the cotton warehouse and terminal facilities for which \$3,000,000 bonds were recently voted. The contract is for filling estimated at 2,000,000 cubic yards and clearing 90 acres, proposals to be opened on July 20. Plans and specifications are on file at the New Orleans offices of Ford, Bacon & Davis, the New York engineers, who have been engaged as engineers in charge for this big-cotton warehousing system. Present plans provide for constructing six buildings for cotton storage, each structure to be 600 feet long by 100 feet wide and 120 feet or eight stories high. They provide for concrete fire-proof construction, and the estimated cost is \$2,500,000. Each warehouse will have a capacity of 54,000 bales of cotton, a total of 270,000 bales for the six structures.

Grading of Cotton

By COMMISSIONER W. A. GRAHAM of the North Carolina Department of Agriculture.

Congress has authorized the Secretary of Agriculture to establish nine grades or standards of cotton, which he has done, but there is no law legalizing these standards and making them legal authority to settle disputes. This should be done, and the matter not left, as now, to the option of the different exchanges. I sent Senator Smith and Mr. Lever of the House of Representatives amendments to be made to their bills, which they have introduced covering this point, and I hope when the law is enacted it will contain some provision along this line. The national law will prevail in settling foreign and interstate business, and the State can, if it approves, adopt it for local transaction when there is a dispute as to the standard of any bale. There will be no need of the law when the cotton is sold on sample and the buyer and the seller are satisfied.

In fixing the standards I ascertained by correspondence with the National Department that the length and tensile strength of the cotton were not taken into consideration, but only the color and freedom from trash or other foreign substances, as has been the case with buyers in fixing grades heretofore.

The true value of the cotton, whether the color be white, tinges or stains, is in the length and tensile strength of the lint. The trash is objectionable, because it breaks or shortens the lint and thus weakens its tensile strength.

As soon as the cotton is sold by the farmer its true value is considered. The National Department agrees with the writer that each bale of cotton ought to stand for itself as to its value. When a carload of mules is bought to be sold to the farmers, the average price is not ascertained and each mule sold at this figure, but each mule has a price put upon him according to his supposed worth. So it should be with cotton, and I think is after the producer parts with it. The farmer in this, as in almost everything else he does, sells at wholesale and buys at retail prices. His cotton goes at wholesale, and not much is heard about grade until the tinges and stains begin to come into market. The merchant has bought generally at wholesale, but when the time comes to sell he becomes a retailer, and this

contributes to the man who buys the cotton and also to the man from whom he buys anything.

From what I have learned from the papers which I have read and from conversation with men familiar with the question, the final solution will, and should, be to have the cotton graded, weighed and branded at the gin. The grader must be a man skilled in his business, who has passed an examination before a board authorized to act upon the subject, and receive a license as a grader. It will be too expensive to have a grader at every gin. Cannot one (who might be the gin reporter for the county) act at several gins as a grader in the revenue service might act at several distilleries if the liquor was kept in a tank and released when gauged? This matter can be worked out satisfactorily. I make these suggestions as a start.

I thought that the grade middling might be fixed with a certain length and tensile strength of lint and the grades advanced and reduced from this point, and a certain per cent. as to price be regulated by reference to the price of middling; but men well posted in the trade say that this cannot be done; that the handling of the sample will affect the length and strength and amount of trash in a short time and the quality be changed. At the cotton exchanges samples for grades are changed frequently during the season; on some exchanges every day by a committee appointed for the purpose. They say that the National Department will have to change its standards at least every other year.

The Agricultural and Mechanical College should give instruction on grading, and, as soon as they can be had, men capable of explaining this should be and will be placed on the institute force of the farmers' institutes. I endeavored to find some last season, but none capable were available.

I suggested to Senator Smith and Mr. Lever establishing by law the length of staple of one inch and under as short staple, and above one inch as long staple.

It is not practicable to fix a price for middling grade and arrange the price of other grades by this, for frequently the demand is heavy for different grades to fill orders and the price is high, but when the demand is

Increased Cement Production.

The year 1913 was a record-breaker in the cement industry, according to Ernest F. Burchard of the United States Geological Survey in a chapter from "Mineral Resources, 1913," just published. The total quantity of Portland, natural and puzzolan cement produced in the United States last year was the greatest in the history of the cement industry, amounting to 92,949,102 barrels, valued at \$93,001,169, compared with 83,351,191 barrels, valued at \$67,461,513, in 1912.

The total production of Portland cement in 1913 as reported to the Geological Survey was 92,097,131 barrels, valued at \$92,557,617; the production for 1912 was 82,438,096 barrels, valued at \$67,016,928. The quantity of Portland cement produced, 92,097,131 barrels, is equivalent to 15,623,620 long tons. Compared with the production of pig-iron for 1913, which was 30,966,301 long tons, the Portland cement production is nearly 50.5 per cent. of the quantity of pig-iron.

Of the 113 producing plants in the United States in 1913, 23 were in the State of Pennsylvania, whose output was 28,701,845 barrels of Portland cement, the largest quantity produced by any one State. The second greatest production came from Indiana, with 10,872,574 barrels, and California was third, with 6,159,182 barrels.

The natural cement produced in the United States in 1913 amounted to 744,658 barrels of 265 pounds each, valued at \$345,889, compared with an output of 821,231 barrels, valued at \$367,222, in 1912, a decrease in 1913 of 76,573 barrels and of \$21,333 in value. Puzzolan cement was manufactured in 1913 at three plants in the United States, in Alabama, Ohio and Pennsylvania. The output of puzzolan and Colloz cements in 1913 was 107,313 barrels, valued at \$97,663, compared with 91,864 barrels, valued at \$77,363, in 1912, an increase in quantity of 15,449 barrels and in value of \$20,300.

The United States has a comparatively small export trade in cement. In 1913 the total quantity exported was only 2,964,358 barrels, most of which was Portland cement, valued at \$4,270,666, compared with 4,215,232 barrels, valued at \$6,160,341, in 1912.

Steel Sheet Piling for Levee Work

INTERESTING FEATURES OF A SHIPMENT FROM PITTSBURGH TO MEMPHIS

An interesting record in manufacturing and transportation was made recently in connection with an order given the Carnegie Steel Co. of Pittsburgh for steel sheet piling for use in levee construction at Memphis, Tenn.

The Mayor and Board of Commissioners of the city of Memphis are engaged in the construction of a concrete levee on the Mississippi River and along the tracks of the Illinois Central Railroad from a point about 1400 feet south of Auction avenue north for a distance approximately 6000 feet to a point in the north yards of the Illinois Central Railroad Co., about 1900 feet north of Keel avenue.

The project contemplates the removal of the present cinder and sawdust fill along the river bank; the removal, at least temporarily, of one of the tracks of the Illinois Central Railroad Co.; the removal of all of the buildings of the Chickasaw Cooperage Co. now at the site; the taking out of the west wall of the Gayoso Oil Mill; the cutting of the 48-inch cast-iron sewer main at Auction avenue, and the construction of certain reinforced and plain concrete walls under which steel sheet piling is to be driven for a core or cut-off.

The walls over the sheet piling will be of two types; first, a counterfort wall with the wall proper central

river shipment in the barge Edgar Thomson, which is one of the American Steel & Wire Co.'s fleet of model steel barges in use on the Ohio and Mississippi rivers for the transportation of steel products moving from the Pittsburgh plants of the United States Steel Corporation.

A barge loaded as full as this one was would draw in the neighborhood of 10 or 11 feet of water, so that a stage of at least 14 feet was required to insure getting the barge out of No. 1 Pool, Monongahela River. River conditions were satisfactory at the time loading was completed, so that the material need not be delayed on account of stage of water in the river. The barge left Pittsburgh on May 15 and arrived at Memphis on May 30. Barge shipment was made in exceptionally good time on account of these conditions, and in consequence compares favorably with an untraced all-rail shipment, although the first car of an all-rail shipment would have gotten away possibly a week or ten days before the barge.

The all-rail rate of freight from Pittsburgh to Memphis is \$5 per net ton, and while the freight rates covering river movement are not published, it may be sufficient to state that the river rate was about two-thirds of the all-rail rate.

SELF-PROPELLED STEEL BARGES.

John H. Bernhard Continues to Demonstrate Their Value for Inland Navigation.

The faith that John H. Bernhard has in the adaptability of self-propelled steel barges to inland navigation as an important factor in the solution of the transportation problem of the country is to be given another demonstration next week, when he will send a 1000-ton barge up the Mississippi River from New Orleans to St. Paul. The barge will leave New Orleans on July 6, and is expected at St. Louis on July 20 and at St. Paul on July 29. It will carry a cargo of general merchandise upstream and a cargo of flour on the down trip. On the barge will travel several officials, a Governor and three of the engineers in charge of Mississippi improvement work, together with representatives of the press. Referring to the trip, Mr. Bernhard writes to the MANUFACTURERS RECORD:

"This trip is to demonstrate the feasibility of Mississippi River navigation and to prove my contention that with the proper modern draft such navigation can be economical. At the end of the trip I will make public an accountant report sworn to before a notary public showing exactly what profits have been made, and thus at freight rates that will be great reductions over rail rates. The rate, for example, from New Orleans to St. Louis is \$1.80 per ton. We will get rousing receptions at Burlington, Davenport, La Crosse and St. Paul."



MODEL STEEL BARGE "EDGAR THOMSON" LOADED WITH STEEL SHEET PILING.



INTERIOR OF STEEL BARGE SHOWING PILING STOWED IN HOLD.

over the top of the sheet piles, and second, a core wall one foot thick in which a pile about every 10 feet will extend upward to the top of the wall. These walls will be in part of the gravity type and in part of the cantilever type.

For the sheet piling core has been selected 12½-inch 38-pound United States Steel sheet piling, which will be driven through about 10 feet of sand and gravel, 35 feet of soft clay and 3 feet of hard blue clay into which the bottom of the piling will penetrate. There will be required some 3325 pieces of steel piling, ranging in length from 24 to 50 feet, with a large percentage between 40 and 50 feet. Some lengths longer than 50 feet will be spliced to obtain lengths up to 60 feet, it being more desirable to drive the piling in spliced lengths than to drive the single lengths up to 60 feet. The amount of piling involved is 1474 net tons, sufficient to drive a line of wall about 3600 feet long. The contract for the piling was made by the Mayor and Commissioners of the City of Memphis with the Pidgeon-Thomas Iron Co. for execution by the Carnegie Steel Co., Pittsburgh, Pa., manufacturer of United States Steel sheet piling, symmetrical interlock channel bar piling and Friestedt interlocking channel bar piling.

The order was dated at Memphis on April 25, and was entered at the Homestead Steel Works plant of the Carnegie Steel Co. on April 30. The piling was rolled during the first week of May, and after being cut to length and punched, was transferred to the Edgar Thomson loading dock in 37 loaded cars with 7 idlers, 44 cars in all, which, if made by all-rail movement, would have been more than an average trainload. At Edgar Thomson Steel Works the entire order was reloaded for



UNLOADING STEEL SHEET PILING AT MEMPHIS BY A POWERFUL CRANE USED REGULARLY IN UNLOADING LOGS.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS RECORD. We shall be glad to have such matters at all times, and also to have any general discussion relating to cotton matters.

SOUTHERN SPINDLES AND LOOMS.

Announcements of Additions in Second Quarter of 1914 Representing \$2,562,100 Investment.

During April, May and June there was increasing activity, as compared with the first quarter of the year, in adding to the total of Southern spindles and looms. Announcements of the second quarter of 1914 indicate an investment of approximately \$2,562,100 for the installation of 102,484 spindles and 1016 looms by 17 mill companies, contracts for this machinery and the buildings (where necessary) having nearly all been arranged. Five of the companies are new organizations, intending to install 24,696 spindles and 120 looms, requiring an investment of about \$617,400, while 12 com-

SOUTHERN TEXTILE ADDITIONS PLANNED IN SIX MONTHS.

Name.	Alabama.	Location	Spindles.	Looms.
*Anniston Yarn Mills.....	Anniston	.....	3,264	.....
*Merrimack Manufacturing Co.....	Huntsville	.....	.....	300
Bettie Francis Cotton Mills.....	Alexander City	.....	5,472	.....
			8,736	300
	Georgia.			
*Muscookee Manufacturing Co.....	Columbus	.....	25,000	.....
*Swift Spinning Mills.....	Columbus	.....	13,000	.....
			38,000	.....
	Kentucky.			
Sterling Spinning Co.....	Louisville	.....	1,224	.....
	North Carolina.			
National Yarn Mills.....	Belmont	.....	13,000	.....
*Pilot Manufacturing Co.....	Gastonia	.....	11,500	.....
*Riverside Mills.....	Worthville	.....	648	.....
*Selma Cotton Mills.....	Selma	.....	5,280	.....
*Loughurst Cotton Mills.....	Roxboro	.....	5,000	.....
			35,428	.....
	South Carolina.			
*Lexington Manufacturing Co.....	Lexington	.....	.....	100
*Banna Manufacturing Co.....	Goldville	.....	4,096	96
Shamrock Damask Mills.....	Landrum	.....	.....	20
			4,096	216
	Tennessee.			
*Brookside Mills.....	Knoxville	.....	.....	400
	Virginia.			
Clinton Mills Co.....	Emporia	.....	5,000	100
*Lynchburg Cotton Mills Co.....	Lynchburg	.....	10,000	.....
			15,000	100
Total for first quarter of 1914.....			75,703	954
Total for second quarter of 1914.....			102,484	1,016
Total for six months of 1914.....			178,187	1,970

*Established mills enlarging.

panies are increasing their equipments to the extent of 77,788 spindles and 896 looms, a \$1,944,700 investment. With this quarter it is seen that the enlarging mills are installing many more spindles than are the new companies, this situation having prevailed for some years until during the first quarter of 1914. The enlarging mills of April, May and June are credited with more than three times as many spindles as the new plants, the expenditures averaging the same.

For the six months of this year the total is 178,187 spindles and 1970 looms, an approximate investment of \$4,454,675. Of this amount, 65,699 spindles and 750 looms are for nine new companies expending about \$1,642,475, while 112,488 spindles and 1220 looms are for 21 established enterprises adding to their equipments at a cost of about \$2,812,200.

The past three months' reports include the following important announcements:

Crystal Springs Bleachery Co., Chickamauga, Ga., completed its \$600,000 plant, containing 20,160 spindles, 700 looms, etc., for a daily output of 50,000 yards of cloth for cotton bags. National Yarn Mills, Belmont, N. C., organized with \$200,000 capital to erect 338x128-foot building and install 13,000 spindles, with belted electric drive, for spinning fine combed yarns. Muscookee Manufacturing Co., Columbus, Ga., decided to build another mill, 25,000 spindles to be installed, but has not decided details. Flint Manufacturing Co., Gastonia, N. C., will build an addition to have 11,500 spinning spindles, thus about doubling present equipment,

in order to cease night spinning. E. V. Benjamin, New Orleans, purchased the Magnum Cotton Mills in that city and will operate the plant with 40,000 spindles, 1300 looms, etc., by electric power, this big plant having been idle for several years. Clinchfield Manufacturing Co., Marion, N. C., awarded all contracts for its \$500,000 plant of 20,000 spindles and 600 looms, the main building to be three stories high, 350x132 feet, with rope-drive power plant. Revolution Cotton Mills, Greensboro, N. C., announced progress on the construction of its \$1,000,000 addition to have 40,000 spindles, 1100 looms, 700 cards, etc. Swift Spinning Mills, Columbus, Ga., contracted for additional buildings and 13,000 spindles.

The announcements of the second quarter period of 1914 are briefly summarized in the accompanying table.

Grantville Hosiery Mills.

The Grantville (Ga.) Hosiery Mills will build mill addition, add 5000 spindles, install new engine, etc. This company's plans include the following: Increase from 5000 to 10,000 spindles; erect brick construction building, 220 feet long by 100 feet wide, with tar-concrete floor and tar-gravel roof; remodel and enlarge power-house; add low-pressure side to engine and install new engine with condensing equipment, heater, pumps, etc. These betterments are in charge of the Park A. Dallas Company, engineer-architect, Atlanta.

The Cotton Movement.

In his report for June 26 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 209 days of the present season was 14,289,025 bales, an increase over the same period last season of 713,850 bales. The exports were 8,684,960 bales, an increase of 399,252 bales. The takings were, by Northern spinners, 2,470,003 bales, a decrease of 28,685 bales; by Southern spinners, 2,877,243 bales, an increase of 205,211 bales.

Seeking Woolen Mill Location.

C. G. Schellenberger, Battle Creek, Mich., writes to the MANUFACTURERS RECORD that he is seeking a location for a 500-band woolen mill. This location must comprise a good site, with water supply and additional land for dividing into building sites for employees' dwellings.

Textile Notes.

E. M. Holt Plaid Mills, Burlington, N. C., will add 24 thirty-six looms, and has awarded the contract for this new weaving machinery.

The Prospect Mills, Batesburg, S. C., has been incorporated with \$25,000 capital as successor to the Batesville Mill, manufacturer of cotton yarn. MacMillan B. King will be president, and E. J. D. Camps, treasurer.

GOOD ROADS

WEEK'S HIGHWAY RECORD.

Progress in Southern Road and Street Improvement.

[Further details of highway undertakings and bond issues mentioned below are given under the headings Construction Department and New Securities, published elsewhere in this issue.]

Bonds Voted.

Arcadia, Fla.—District No. 5 of De Soto county voted \$350,000 bonds to construct roads.

Ennis, Tex.—City voted \$35,000 bonds to pave streets.

Jonesboro, Tenn.—City voted \$15,000 bonds to improve streets.

Kinston, N. C.—City voted \$100,000 bonds to improve streets, etc.

Pikeville, Ky.—City issued \$55,779 of bonds to improve streets.

Winston-Salem, N. C.—City voted \$50,000 bonds to grade and curb streets.

Bonds to Be Voted.

Jacksonville, Fla.—Duval county votes August 4 on \$2,000,000 bonds, of which \$1,500,000 will be for road construction.

Quitman, Ga.—City votes in August on \$75,000 to \$125,000 bonds for street, sidewalk paving, etc.

Ripley, Tenn.—Lauderdale county votes July 14 on \$15,000 bonds for street improvements, etc.

Savannah, Tenn.—Hardin county votes August 6 on \$240,000 bonds to construct roads.

Contracts Awarded.

Beaumont, Tex.—Chamber of Commerce awarded contract to build 3000 feet of road; cost \$6500.

Corsicana, Tex.—Road District No. 1 of Navarro county awarded contract to construct 70 miles of rock roads.

Greensboro, N. C.—City awarded contract at \$1.60 per square yard for concrete paving; 6000 to 8000 square yards.

Nashville, Tenn.—City awarded \$16,779 paving contracts.

Parkersburg, W. Va.—Nelson & Meredith, Marietta, O., have contract to pave four miles of road.

Sedalia, Mo.—Jas. R. McAllester has contract to construct 2¾ miles rock road.

Versailles, Ky.—City awarded \$12,720 paving contract.

Waco, Tex.—McLennon county awarded contracts aggregating about \$800,000 to construct about 175 miles of road, and about \$120,000 for bridges, with gravel and bitumen for the roads to cost another \$120,000.

Contracts to Be Awarded.

Baltimore, Md.—State receives bids until July 14 to build seven sections of State highway; about 26.62 miles.

Oakwood, P. O. at Knoxville, Tenn.—Town will expend \$30,000 to improve streets.

Hammond, La.—State invites bids until July 15 to construct about 13 miles of road.

Largo, Fla.—City will pave about one mile of streets.

Lexington, Ky.—City opened bids June 29 to pave 86,805 square yards with brick, asphalt, wooden block, asphalt block, asphalt binder (macadam), granite block or cement.

Miami, Fla.—Dade county will construct one mile of rock road.

Milford, Tex.—City will improve streets; cost \$4000.

Muskogee, Okla.—City Council appropriated \$10,000 to improve roads and \$2000 to improve boulevards.

New Martinsville, W. Va.—Wetzel county receives bids until July 18 to build and improve about 22 miles of dirt road.

Southport, N. C.—Brunswick county will construct roads; \$50,000 available.

Ocean to Ocean Highway.

The Dixie Overland Highway Association has been organized at Columbus to provide the construction of an all-year-round ocean to ocean highway by way of Savannah, Ga., to Columbus, Ga.; Montgomery and Selma, Ala.; Meridian, Jackson and Vicksburg, Miss.;

Shreveport, La.; Dallas and Fort Worth, Tex., and Los Angeles, Cal. Frank Lumpkin of Columbus, Ga., is president; Frank Battey of Savannah, Ga., vice-president, and Leland J. Henderson of Columbus, Ga., secretary.

FROM WASHINGTON TO ATLANTA.

Progress Upon the Highway to Be Used as an Object-Lesson in Maintenance.

Under the co-operative auspices of the American Highway Association, the National Public Roads Office and States and counties through which the route of the highway from Washington to Atlanta lies was inaugurated last month the object-lesson in maintenance of a model highway which is attracting widespread attention. The first map of the route to be prepared is reproduced with this. Extending for a distance of 892.7 miles through Virginia, North Carolina, South Carolina and Georgia, the three main sections of the highway have been placed in immediate charge of Government

tailed to supervise the maintenance will have charge of the inspection and construction. This work is likely to assume large proportions, and although at the present time exact figures are not at hand for all lines, in North Carolina \$54,000 has been appropriated in three counties for the improvement of this particular route as follows: Granville, \$10,000; Johnston, \$40,000; Cumberland, \$4,000; total, \$54,000.

"The work of supervision is divided into three districts, as follows:

"Southern Section—Atlanta, Ga., to Augusta, Ga., 351 miles (two routes), George C. Scales.

"Central Section—Augusta, Ga., to Fayetteville, N. C., 295.6 miles, W. L. Spoon.

"Northern Section—Fayetteville, N. C., to northern terminus of road, probably Petersburg, Va., 246.1 miles, D. H. Winslow.

"In addition to the above, there are one or two alternative routes which will probably be incorporated in the maintenance project in the course of this present season. These are between Cheraw and Camden by way of Darlington and Hartsville; from Raleigh to Pinchurst by way of Sanford and a spur line from

way Association, have been turned over to the engineers assigned to the highway, and are now covering the entire stretch of mileage.

Arrangements are being made for tours over the road to the congress at Atlanta in November.

CONTRACTS FOR NEARLY \$1,000,000.

Awarded for Road and Bridge Construction in McLennan County, Texas.

Contracts amounting to nearly \$1,000,000 have been awarded by McLennan County Commissioners, Waco, Tex., following the county's recent vote of \$1,075,000 bonds for road and bridge construction. These contracts are for work in Justice Precincts Nos. 1 and 3, including 175 miles of road. The road contracts aggregate \$804,145.39, the gravel and bitumen to be furnished by the county at an estimated cost of \$122,413.26, while the bridges will cost \$120,126.04, a total of \$926,684.69 for the entire work. Road contracts were divided as follows: Ocklander Bros., Waco, 1½ miles brick, 16 miles bituminous macadam, .009 mile concrete, 35 miles gravel, 13¾ miles sand-clay, \$197,381.48; L. H. Fritchett, Waco, 9½ miles water-bound macadam, 33 miles concrete, 7½ miles gravel, \$94,605.13; Flannagan Bros., Waco, 18 miles water-bound macadam, 1.2 miles concrete, 11½ miles gravel, \$129,448.45; Richard Morey, St. Louis, 15 miles bituminous macadam, 24 miles gravel, 15½ miles water-bound macadam, 1.2 miles concrete, \$202,710.33. Bridge contracts: McCall-Moore Engineering Co., Waco, at \$80,225.40, and Richard Morey, St. Louis, at \$30,800.64. R. J. Windrow, county engineer, prepared specifications.

Improvements on Texas Coast.

Percival & Son, engineers and surveyors, writing from Rockport, Tex., to the MANUFACTURERS RECORD, say:

"Development of considerable importance and magnitude is in progress on the Texas southwest coast at Harbor Island and Port Aransas, where the Government is spending large sums for making and improving a deep and extensive harbor. Cotton steamers are already carrying freights direct to European ports. The whole country from this point to the Rio Grande border has experienced a wonderful development during the past few years.

"Last month Nueces county, southward, voted bonds for the construction of a highway causeway across the Nueces Bay as an additional means of reaching this harbor, and for general traffic. Aransas county has voted \$275,000 of 5½ per cent. bonds, of which \$25,000 is for a highroad across the small bays to Bayside and the west, and \$250,000 for a causeway to combine highway and railroad traffic across the Copano Straits, giving the only direct north and south gateway to this harbor. This causeway will be about 12,000 feet in length across the shallows, and consist of a steel-lift bridge, some 3000 feet open trestle and the balance protected fill. Percival & Son, county engineers, have already made preliminary surveys, and upon completion of drawings bids for the construction will be let."

A Practical Automobile Club.

Knoxville Automobile Club,

Knoxville, Tenn., June 23.

Editor Manufacturers Record:

The Knoxville Automobile Club has in mind and well under way the placing of about 200 mileposts in Knox county, Tennessee, which we suppose would be about 10 feet above the ground and set in concrete and at the extreme top of the post in a half-circle would be placed the words "Knox County." Just beneath this would be "Compliments of Knoxville Automobile Club," and just beneath this the name of the town and the distance thereto on both ends of the road. On the balance of the post we are going to place advertisements, for which we will get liberal pay, and the proceeds over and above the cost of the posts and the maintenance thereof we will use to buy road drags and such other tools and supply them gratis to the farmer to keep the dirt roads in repair. We want to get prices on such posts, and if you will place this before your advertisers we will appreciate it.

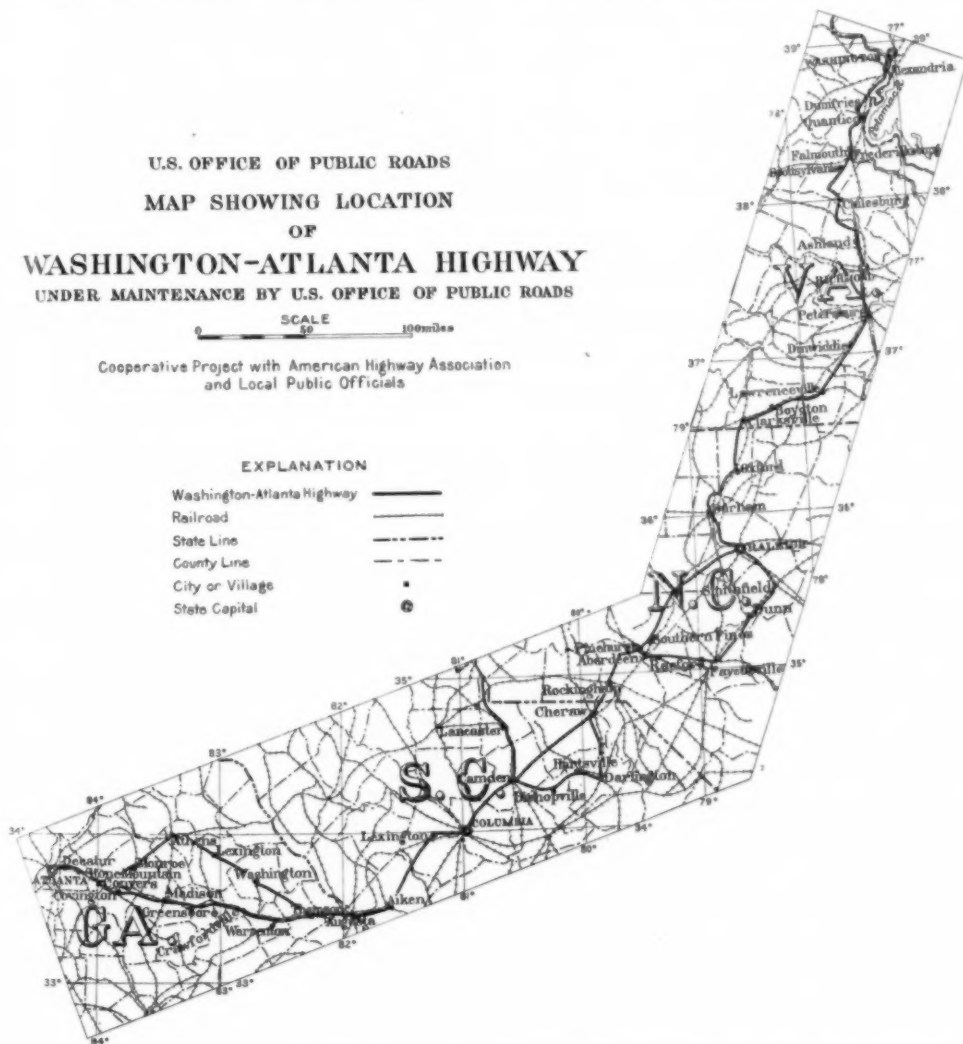
T. E. PLYLEY, President.

U.S. OFFICE OF PUBLIC ROADS MAP SHOWING LOCATION OF WASHINGTON-ATLANTA HIGHWAY UNDER MAINTENANCE BY U.S. OFFICE OF PUBLIC ROADS

SCALE 0 50 100 miles
Cooperative Project with American Highway Association and Local Public Officials

EXPLANATION

Washington-Atlanta Highway
Railroad
State Line
County Line
City or Village
State Capital



engineers. The latest report to the Director of the United States Office of Public Roads by the chief of the division of maintenance tells of activities along the route as follows:

"Applications have been received from the following counties along the route:

"Virginia, 2 out of 11; North Carolina, 7 out of 10; South Carolina, 4 out of 8; Georgia, 12 out of 19; total, 25 out of 48.

"The total mileage placed under the direction of this office is 581.3 miles and the funds pledged \$27,525, distributed as follows:

	Miles.	Amount.
Virginia.....	75	\$1,575
North Carolina.....	172.3	9,815
South Carolina.....	113	4,740
Georgia.....	221	11,395

"Two counties in South Carolina, three counties in Georgia and two more counties in Virginia have signified their intention to enter the project.

"In several counties construction work, prior to maintenance, will be necessary, and arrangements are being made as cases arise to inspect and give general assistance during this construction the same engineers de-

Camden to Lancaster in South Carolina to connect with the Charlotte road at the North Carolina State line.

"Application has also been received from the Board of Trade of Augusta, Ga., to investigate the possibility of extending the project from Augusta, Ga., to Jacksonville, Fla., by way of Savannah, Ga.

"Necessary arrangements have been completed for taking over the automobiles, and three Ford cars were placed in the hands of the three engineers detailed to the work on the 23d of May, and are now in use."

The first practical experiment in Government maintenance of interstate highways, now being undertaken on the stretch of road from Washington, D. C., to Atlanta, Ga., will be well under way before the assembling of the American Road Congress at Atlanta November 9. The American Highway Association, which originated the Government's experiment, has already taken steps, in conjunction with the American Bar Association, to make the road laws of the different States more uniform, and the practical experiment on the road from Washington to Atlanta is designed to make the roads themselves more uniform and bring about continuity in improvement and maintenance.

Three automobiles, purchased by the American High-

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

COAL TERMINALS AT CHARLESTON.

Construction of Extensive Facilities to Begin Within Sixty Days.

[Special Correspondence Manufacturers Record.]

Charleston, S. C., June 29.

After a period of conservative and steady business expansion covering the last few years, Charleston's industrial growth will be accelerated by the coming of a new railroad and the building of huge coal terminals on the water front. Last Saturday a contract was signed by officers of the Holston Corporation and by Mayor John P. Grace for the city of Charleston under which the corporation agreed to begin the construction of coal terminals on its Town Creek site within 60 days from July 1 in consideration of the transfer of a 60-foot right of way for a railroad to the Norlina Construction Co. by the city. The Holston Corporation, of which Mark W. Potter of New York is president, is a subsidiary of the Carolina, Clinchfield & Ohio Railroad, extending from Spartanburg, S. C., to the rich Clinchfield coal beds in southwestern Virginia. The signing of the agreement for the construction of the terminals by the Holston Corporation makes it absolutely certain that Charleston will be the port of these extensive coal fields.

The Clinchfield coal, it is believed, will be brought to Rostic, N. C., on the Carolina, Clinchfield & Ohio, taken through Charlotte, N. C., to McBee, S. C., on the Seaboard Air Line, transferred at McBee to the Carolina, Atlantic & Western Railroad and carried to Charleston through Hartsville, Darlington, Florence and Poston. The link in the Carolina, Atlantic & Western which is to connect Charleston and Poston is now under construction. W. R. Bonsal of Hamlet, president of the road, expects the line into Charleston to be completed in time to move the next cotton crop, although this is, of course, problematic. About 1000 laborers are at work on the Carolina, Atlantic & Western between Andrews, S. C., and Charleston. The line from Florence to Poston was completed a few weeks ago, and is now in operation. The Carolina, Atlantic & Western Railroad was recently formed by the amalgamation of the North & South Carolina, the South Carolina Western and the Charleston Northern railroads, all of which were under the direction of Mr. Bonsal, who is one of the big railroad men of the South. His enterprise is doing much to develop Charleston and the Pee Dee section of the State. C. C. Graves is traffic manager of the Carolina, Atlantic & Western, and J. E. Hancock is general manager, both of them veteran railroad men.

President Potter is credited with stating that contracts amounting to about \$1,100,000 are required in connection with the purchase of properties and the construction of these coal terminals. Preliminary work was begun on June 29 by the Atlantic, Gulf & Pacific Dredging Co. of New York to construct large dykes around about 70 acres of the terminal site. It is understood that the construction involved will include dock 850 feet long, with deck of concrete cap on concrete piles; fill retained by concrete sheet piles; dock anchored to base of concrete tunnel, supported on wooden piles. Mr. Crosby has considered bids on 600,000 square yards of dredging required; storage bins to have capacity of 650,000 tons coal; capacity for loading vessels to be 1000 tons hourly; plans and specifications by J. W. Frazier Company, Cleveland, O.; engineer has considered bids on dock.

A. D. OLIPHANT.

Building Toward Tuscaloosa.

A contract for construction of a bridge over the Alabama River will soon be let by the Gulf, Florida & Alabama Railroad Co., which is now building an extension of about 50 miles from Broughton to Pine Hill, Ala. Grading on this extension is well advanced, having been under way for several months, and the company has made such progress that it expects to award contract for a further extension and to be able to run trains to and from Tuscaloosa, Ala., by the end of next year. Roy C. Megargel, 35 Pine street, New York, is president of the road, and G. A. Berry of Pensacola, Fla., is vice-president and general manager.

MEMPHIS RAILROAD WORK.

Nearly \$10,000,000 Being Expended There by Several Companies.

The new station of the Illinois Central Railroad at Memphis, which will also be used by the Rock Island and the Frisco trains, is to be put in service August 1, and will be the first of several important pieces of railroad construction there to be opened for use. This improvement cost about \$2,000,000, but there are other costly pieces of railroad work under way in the city. One of these is the J. T. Harahan bridge over the Mississippi, which is being built by the Arkansas & Memphis Bridge & Terminal Co., to cost about \$5,000,000; then there are the shops of the Illinois Central, about \$2,000,000, and the Buntyn or Forrest yards of the Southern Railway, which will cost all told nearly another million dollars. All these pieces of work will aggregate well-nigh \$10,000,000.

New Equipment, Etc.

Illinois Central Railroad placed its order for 2000 cars additional thus: American Car & Foundry Co., Pressed Steel Car Co., Standard Steel Car Co. and Barney & Smith Car Co., 500 each.

Western Maryland Railway is again in the market for locomotives, and may purchase 20.

Charlotte Harbor & Northern Railroad has ordered 30 phosphate cars from the Pressed Steel Car Co., Pittsburgh.

Wabash Railroad is reported to have ordered 60 engines from the American Locomotive Co., New York. The road may also buy 1500 cars.

Alcolu Railroad, Alcolu, N. C., is reported in the market for 50 box cars.

Pennsylvania Railroad has invited bids to supply it with 100,000 tons of 100-pound rails in addition to 37,032 tons already ordered, all for this year's delivery. There are 15,000 tons of 120-pound rails in the orders already placed, but all the rest will be of the 100-pound section. At \$28 per ton the usual price for heavy section rails, these orders will amount to a total of \$3,836,896.

Buckhannon & Northern Railroad has ordered 1500 tons of rails from the Carnegie Steel Co., Pittsburgh.

Florida East Coast Railway is receiving final deliveries on 500 freight cars ordered some time ago.

Piedmont & Northern Lines have received two parlor cars of all-steel construction from the Southern Car Co., High Point, N. C. There will be eight other passenger cars built without motors for trailer service.

Southern Railway's Second Track.

The Southern Railway Co. announces that it expects to have the double-tracking of its main line from Washington to Atlanta, 649 miles, completed within five years. As recently announced by President Fairfax Harrison, the company has arranged for the necessary financing, and the work of constructing second track between Washington and Charlotte is to proceed as rapidly as possible while taking care of the movement of traffic. In this distance, 381 miles, the stretches of single track which now remain to be double-tracked are as follows: Orange to Amherst, Va., 74 miles; Whittle to Danville, Va., 22 miles; Pelham to Greensboro, N. C., 37 miles; Concord to Harrisburg, N. C., 6½ miles; total, 139½ miles. Between Charlotte and Atlanta, 267½ miles, there remains to be built 218½ miles of second track to complete the work. Thus far there is only about 49½ miles of double track between those two cities, namely, 24½ miles from Atlanta to Duluth, Ga.; 23 miles from Suwanee to Gainesville, Ga., and about two miles between Spartanburg, S. C., and Spartanburg Junction. There will be a great deal of heavy construction required in the mountains of the northern part of Georgia. Practically all of the \$20,000,000 of money which the second-tracking will cost will be expended for labor and materials to be supplied largely by the South.

Mountain Line With Odd Name.

The Gulf & Bay Railroad Co. has been chartered in Tennessee to build a line about 50 miles long from Erwin in that State to a connection with the Southern Railway near Hot Springs, N. C. It will be built of

standard gauge, and will traverse a rich mineral and timber region, much of which is owned by A. G. Betts of Stackhouse, N. C., and associates. He is president of the Madison County Railroad. Rights of way have been obtained for the proposed line and a preliminary survey has been made. About one-half of the mileage will be in each State. The incorporators are W. A. Roberts, J. F. Toney, R. M. Barry, I. R. Roberts, J. L. Tucker, I. R. Love, J. D. S. Ryburn and N. T. Tucker, all of Erwin, Tenn. Construction of this road is expected to result in a great lumber development and the erection of numerous sawmills through the timber section.

Montgomery to St. Andrews Bay.

A report from Montgomery, Ala., says that capitalists and business men of New York and Philadelphia are planning construction of a railroad to connect Montgomery with St. Andrews Bay, Florida, and that H. G. Fisk of New York is representing parties interested. It is proposed to make the Birmingham, Columbus & St. Andrews Bay Railroad part of the route. This road is 38 miles long from Chipley, Fla., to St. Andrews Bay, and is now in the hands of a receiver, A. D. Campbell, of Chipley.

Construction immediately in prospect is from Chipley northward to Hartford, Ala., about 28 miles, this, of course, being by the parties who propose the new line. From Hartford to Montgomery the projected route is via Enterprise and Troy, Ala. The name contemplated for the road is Bay City, Lynn Haven & Northern. The Chamber of Commerce at Montgomery is interested.

If the plan goes through it is planned to build terminals at Southport, Fla. (the southern end of the existing road), which will include docks, wharves and warehouses.

Oklahoma Central Sale Order.

The receivership sale of the Oklahoma Central Railroad will take place at Purcell, Okla., July 31, according to an order of the United States Court, which has appointed Wm. B. Johnson of Ardmore, Okla., as special master to make the sale. The line is 125 miles long from Lehigh to Chickasha, Okla., and it owes \$4,100,477. It has been in the hands of a receiver for several years, and was built by Dorset Carter in 1908. It is expected that it will be bought by the Santa Fe system.

Second Track Put in Use.

The Atlantic Coast Line has put in general service 53 miles of second track between Pleasant Hill and Petersburg, Va., which it has been using for freight traffic for several months. It is now well settled and surfaced, and passenger trains are also operated over it. It is equipped with interlocking safety signals and a telephone train-dispatching system. On the second track from Selma to Parkton, N. C., 63 miles, contractors are now at work, with expectations of completing that stretch early in the autumn.

Operating an Acquired Line.

The Baltimore & Ohio Railroad Co. announces that through trains are to be operated, beginning July 1, on the Hampshire Southern Railroad from Romney to Petersburg, W. Va., 39 miles. The Hampshire Southern is practically a continuation of the Green Spring branch, and it was acquired by the B. & O. several months ago. It opens up a region rich in natural resources and prosperous in agriculture, and it is well built.

Important Work Almost Complete.

The Louisville & Nashville Railroad, according to a report from Nashville, Tenn., will open its new double-track line south from that city, and which is locally known as the Lewisburg & Northern Railroad, on July 15, announcement to that effect having been made by the superintendent. The work which will complete the line is now being finished at the Brentwood Cut. While this double-track road has been built principally for freight service, fast passenger trains will also be operated over it as well as over the old route, which runs

parallel, but some distance to the west of the new one, which is constructed with easy grades and curves, so that the trainload capacity of the Nashville division will be materially increased.

Santa Fe Lines Merged.

The Gulf, Colorado & Santa Fe Railway Co., which is the Texas incorporation of the Atchison, Topeka & Santa Fe Railway, has leased and taken over for operation, beginning June 30, the Texas & Gulf Railway, the Gulf & Interstate Railway, the Concho, San Saba & Llano Valley Railroad, and that part of the Pecos & Northern Texas Railway between Coleman and Sweetwater, Tex. These lines have a total of about 350 miles of track. This acquisition is, however, little more than a matter of form, for they were constructed in the interest of the Santa Fe system, and have always been practically under its control. The merger was authorized by a bill passed at the last session of the Texas Legislature.

Trans-Mississippi Terminals.

E. F. Kearney, first vice-president of the Texas & Pacific Railway, has been elected president of the Trans-Mississippi Terminal Co. at New Orleans, succeeding T. J. Freeman, who resigned. Construction of the proposed terminals with an issue of \$7,500,000 of bonds is to be undertaken as speedily as the financing now being negotiated can be completed. The terminals will be used by the Gould Lines, including the Missouri Pacific-Iron Mountain Route, which, as recently announced, has made arrangements for its trains to enter New Orleans. The bonds are to cover both the proposed new terminals in New Orleans and those at Westwego across the river.

Railroad Notes.

J. W. Everman has been appointed general manager of the St. Louis Southwestern Railway Lines, with headquarters at Tyler, Tex., and Ernest Baxter has been appointed purchasing agent of the St. Louis Southwestern Railway at 1743 Railway Exchange Building, St. Louis, Mo., succeeding J. E. Sargeant.

J. R. Kearney has been appointed general superintendent of transportation for the Baltimore & Ohio Railroad system to fill the vacancy caused by the death of C. C. Riley. Mr. Kearney has been superintendent of transportation for several years.

\$4,750,000 FOR DRAINAGE SYSTEM.

Sale of Bonds Ensures Completion of System to Reclaim 500,000 Acres.

Little River Drainage District, Cape Girardeau, Mo., has sold \$4,750,000 bonds to Chicago bankers, and this transaction ensures the completion of the district's system of drainage for 500,000 acres of alluvial land. This property is located in Cape Girardeau, Scott, New Madrid, Stoddard, Franklin and Pemiscot counties, extending a length of 90 miles, and is 10 miles wide. Its reclamation will require the construction of about 625 miles of drainage ditches and 20 miles of levees. Several minor contracts were awarded and initial construction work was begun about a year ago. Further construction will at once begin, and probably will require a plant of 32 dipper dredges, ranging from 1 to 4½ yards capacity, with 8 drag-line machines, electrically operated, ranging from 3½ to 4½ yards. William A. O'Brien of Cape Girardeau is chief engineer of the district. John H. Himmelberger of Cape Girardeau and Alfred L. Harty of Springfield, Mo., are the supervisors.

Cement in Missouri.

Five cement plants of Missouri, two in St. Louis county and one each in Ralls, Jackson and Cape Girardeau counties, in 1913 turned out 4,803,328 barrels of cement, which, at \$1.01 6-10 a barrel, were worth \$4,880,191. Missouri ranks sixth as a cement manufacturing State, according to advance information from the 1914 Red Book of the Bureau of Labor Statistics given publicity today by Commissioner John T. Fitzpatrick. The 1913 output was an increase of 10.28 per cent. over that of 1912, when it amounted to 4,355,741 barrels.

MINING

Appalachian States Metal Mining.

There were 1,603,539 tons of gold, silver, copper, lead and zinc mined in 1913 in the Appalachian States, the output by States being Tennessee 823,645 tons, New Jersey 490,434, Pennsylvania and Vermont 239,178, Virginia 30,916, North Carolina 11,274, Alabama 4068, Georgia 2614, South Carolina 1010 and New Hampshire 400 tons. North Carolina led in gold production, Tennessee in silver, copper and lead, and New Jersey in zinc. In value of products the order by States was New Jersey \$9,421,664, Tennessee \$3,703,752, Virginia \$286,244, North Carolina \$128,685, Pennsylvania and Vermont \$80,309, Georgia \$15,153, Alabama \$11,165, South Carolina \$4905 and New Hampshire \$1680.

The value of the mine output of gold, silver, copper, lead and zinc, according to H. D. McCaskey of the United States Geological Survey, was \$13,753,557, against \$13,470,276 in 1912 and \$11,787,942 in 1911. The figures for 1913 represent the production of 90 mines, of which 48 were gold placer mines (many of them small) 9 zinc mines and 7 copper mines. The total recovery of gold was less, but the yields of silver, lead, copper and zinc were larger in 1913 than in 1912.

The gold output from all mines was 8017.33 fine ounces, valued at \$165,733, a decrease of 2745.91 ounces in quantity and of \$56,763 in value from the production of 1912. The silver output, recovered entirely as a by-product in refining the gold and copper produced, was 111,214 fine ounces, valued at \$67,173, an increase of 14,691 ounces in quantity and of \$7812 in value. Of the gold output in 1913 the placers yielded 733.65 ounces, against 774.83 ounces in 1912, and the quartz or deep mines produced 6892.09 ounces, against 6302.90 ounces in 1912. The copper mines produced 443.50 ounces in 1912 and 391.59 ounces in 1913. Of the 48 producing gold placers in 1913, there were 27 in Georgia, 17 in North Carolina and 4 in South Carolina. There were 18,883 short tons of siliceous ores sold or treated from Appalachian gold mines in 1913, of which 11,186 tons were from North Carolina, 4068 tons from Alabama, 2614 tons from Georgia and 1010 tons from South Carolina.

The output of siliceous gold ore in 1913 was about 15,000 tons less than in 1912, and the gold from deep mines decreased about 2400 ounces.

The copper production in 1913 was 19,964,229 pounds, valued at \$3,094,533, an increase of 698,784 pounds in quantity but a decrease of \$84,349 in value. Of the total output, 19,390,750 pounds came from the Ducktown district of Eastern Tennessee, from 652,253 short tons of pyritic copper ore treated. The remainder was chiefly from Pennsylvania, where, at the Cornwall iron mines, magnetic separation of large tonnages of magnetite ores results in the recovery of copper-bearing pyrite. Vermont and Virginia also contributed to the copper output, while Maryland and North Carolina, which were producers of copper in 1912, reported no output of copper in 1913.

The production of lead was 1,632,000 pounds, valued at \$71,808, an increase of 1,070,974 pounds in quantity and of \$46,562 in value. The production was derived from the lead-zinc mines of Wythe county, Virginia.

The zinc output, figured as spelter, was 184,898,400 pounds, valued at \$10,354,310, an increase of 40,198,537 pounds in quantity and \$370,019 in value. Of the total production, 168,244,000 pounds, valued at \$9,421,664, came from the zinc mines at Franklin Furnace, N. J., and over 11,000,000 pounds came from Eastern Tennessee. About 5,400,000 pounds was produced in Virginia, and smaller quantities in North Carolina and New Hampshire.

Gold in the South.

Six Southern States mined \$165,730 of gold in 1913, North Carolina leading, with \$126,448, or 76 per cent., of the total, Georgia being second, \$15,108; Alabama third, \$11,094; Tennessee fourth, \$7595; South Carolina fifth, \$4881, and Virginia sixth, \$604. Although there is still much gold in the South, the output has never regained its relative importance enjoyed up until the discovery of gold in California in 1849. Until 1830 all the gold coined in this country was supplied chiefly by North Carolina, and by 1838 production in the South had assumed such proportions that branch mints were established at Charlotte, N. C.; Dahlonega, Ga., and New Orleans. Up to October 31, 1850, Southern

gold sent to the mint and its branches amounted to \$15,004,792, of which North Carolina had supplied \$6,707,458; Georgia, \$6,018,693; Virginia, \$1,197,838; South Carolina, \$817,692; Alabama, \$186,627, and Tennessee, \$76,574.

Missouri Coal in 1913.

The production of coal in Missouri in 1913 was 4,318,125 short tons, valued at \$7,468,308, a decrease compared with 1912 of 20,731 tons in quantity and of \$165,556 in value. With the exception of 1912, however, the output in 1913 was the largest in the history of the State. The decreased production in 1913 was due primarily to the exceptionally mild weather in February and March, according to E. W. Parker of the United States Geological Survey, the output in those two months being nearly 135,000 tons less than in the corresponding period in 1912. The deficiency was made up in part by an increased demand from the railroads. The coal-mining industry suffered somewhat from the drought during the summer, and at times water for boiler use had to be hauled to the mines. Transportation facilities were ample and satisfactory, and there was little interruption to mining operations on account of labor troubles.

The number of fatal accidents in the coal mines of Missouri in 1913 was reduced to just one-half of the fatalities of the preceding year, or from 20 to 10, according to reports to the Bureau of Mines.

The occurrence of coal in Missouri appears to have been known as early as 1806, when, according to "An account of expeditions to the sources of the Mississippi," etc., by Zebulon M. Pike, it was noted on the banks of the Ohio River. The coal attracted the attention of the early settlers, and numerous small local mines are reported to have been opened by them. No record is extant of the quantity of coal produced in those early days in Missouri, and the first statement regarding the quantity mined in the State is contained in the report of the United States Census for 1840, in which year a production of 9972 tons is recorded.

Missouri Zinc.

The Missouri Bureau of Labor Statistics, in a bulletin given out for publication today by Commissioner John T. Fitzpatrick, asserts that the 1913 production of zinc concentrates was 248,431 tons, worth, in this crude form, \$9,664,421. This quantity when smeltered and refined into spelter made 124,963 tons, valued at \$13,995,856. The 1913 Missouri output of zinc consisted of 226,850 tons of sphalerite concentrates, valued at \$9,180,960, and 21,531 tons of silicate and carbonate, valued at \$488,463. Joplin mines turned out 42,061 tons of sphalerite, valued at \$1,775,228, and 1457 tons of silicate and carbonate, worth \$26,651. The Webb City-Carterville-Prosperity district produced 77,469 tons of sphalerite zinc, valued at \$3,173,220. The Sherwood-Thoms district is credited with 21,700 tons of sphalerite, worth \$774,180. The largest production of silicate and carbonate zinc came from Granby district, amounting to 10,708 tons, worth \$269,133. Central and Southeast Missouri did not market as much ore as it has done in former years, the quantity sent to refineries being only 672 tons and the value \$14,065.

To Develop Tennessee Copper.

Recently incorporated, with \$500,000 capital stock, to develop 200 acres of copper-bearing land at Ducktown and Copperhill, Tenn., the Chattanooga Copper Co. has organized, with main offices at Chattanooga and the following officers: J. I. Carter, president; John Staigmaier, first vice-president; G. H. Miller, second vice-president; Sam E. Whitaker, secretary; P. B. Carter, treasurer; all of Chattanooga. The company is not as yet ready to announce development details.

Big Fertilizer Plant for Houston.

A \$150,000 fertilizer plant will be built at Houston by the Armour Fertilizer Works of Chicago. It will have an annual capacity of 30,000 tons of fertilizer, the output to include sulphuric acid. The company will utilize a six-acre site and will undertake the necessary construction by its own force.

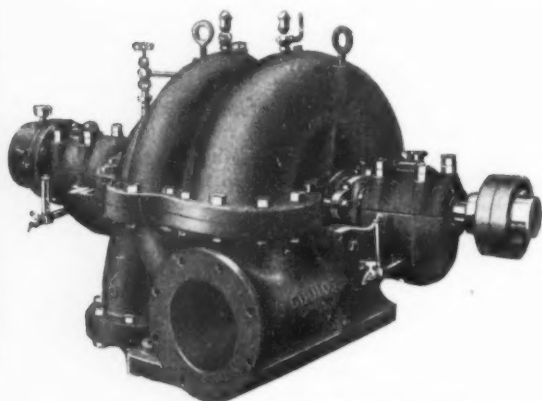
MECHANICAL

Illustrations and descriptions having news value pertaining to developments in machinery, mechanical devices and inventions will be considered for use in this department.

Goulds Centrifugal Fire Pumps.

A type of centrifugal fire pump of simple construction, which is adapted for direct connection to electric motors or steam turbines, is shown in the illustration as made by the Goulds Manufacturing Co. of Seneca Falls, N. Y. The two-stage, No. 6, 1000-gallon centrifugal fire pump is the size shown.

In the design of these pumps special provision has been made to give easy access to all parts for inspection and repair purposes. The pump casing consists of two castings only, horizontally divided on a plane passing through the center of the shaft, with both the suction



GOULDS CENTRIFUGAL FIRE PUMP.

and discharge nozzles cast integral with the lower half. The phosphor-bronze impellers are of the enclosed type, and have vanes of such shape as to give highest efficiency when operating under conditions for which the pump is built. The shaft is of open-hearth high-carbon steel, heat treated, with bearings of the ring-oiling type and mounted in housings bolted to the lower half of the pump casing, and the stuffing-boxes are fitted with split bronze glands designed so that water working through them cannot be thrown off from the shaft, but is drained into drip pockets. The capacity of these pumps is large for the floor space required, and they are designed to be economical in construction and operation. Bulletin 118, issued by the company, contains full description of this type of pump.

New Large Bliss Drawing Press.

The drawing press shown in the illustration was recently designed and built by the E. W. Bliss Company of Brooklyn, N. Y., is one of the largest drawing presses ever built. It is of the tie rod construction, in which the working strain is taken by large vertical steel tie rods, and has an extreme height of about 40 feet. It weighs 650,000 pounds.

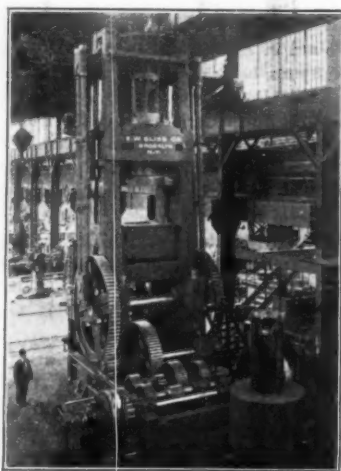
The press was designed to draw steel shells as large as 48 inches in diameter. It will draw and lift out shells as deep as 40 inches and draw and push through shells 45 inches deep. When shells are lifted out, the positive bottom knockout which is stationary, but adjustable for the different heights of shells, is used. Blanks as large as 64 inches in diameter and three-sixteenths inch thick may be drawn.

The table carrying the die is operated by a powerful toggle motion, which connects to the two crankpins on the main gears. The plunger carrying the punch is operated by the steel crosshead, which is connected by two double connecting rods to the crankpins on the main gears. The blankholder is stationary. The plunger and blankholder adjustments are each accomplished by individual electric motors. Before adjusting the blankholder is unlocked and after adjusting is locked by an electric motor. All motors for adjusting are directly attached to the machine.

The entire train of gearing is of steel, with machine-cut teeth. The machine has three ratios of gearing, 200:1, 100:1 and 67:1. By means of change gears the speed of operation may be varied from 1½ to 3 and

4½ revolutions per minute, as may be required for the different classes of work to be produced.

The crosshead and bed are counterbalanced by an hydraulic accumulator, which may be placed above or



GEAR SIDE OF BLISS DRAWING PRESS.

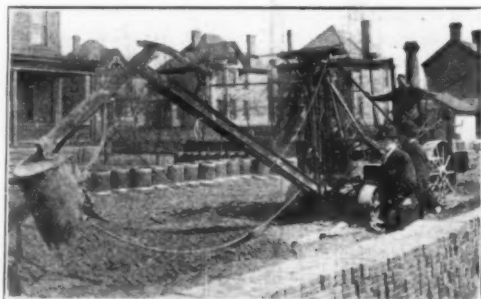
below the floor line, nearby or in any suitable place from the press, as may be most convenient.

The machine is driven by 200-horse-power electric motor, and is controlled by a powerful hand-actuated friction clutch of the double-grip type.

Keystone Traction Ditch Digger.

A combination traction steam shovel, dirt loader and ditch digger has been designed by the Keystone Driller Co. of Beaver Falls, Pa., to meet the demand for a light, portable and comparatively inexpensive equipment. When used as a tractor it has a speed of from one to three miles per hour, and can go anywhere that a dump wagon can be taken with a team on account of its lightness and ease of operation. Treadwheels are provided with removable cleats and steering wheels with removable cutter-heads, which can be taken off while traveling over paved roads.

The machine may be operated in three ways by using the dipper, skimmer and ditcher scoops. The dipper scoop is carried on high dipper sticks, directed, lowered and raised by the boom. It may be operated in practi-



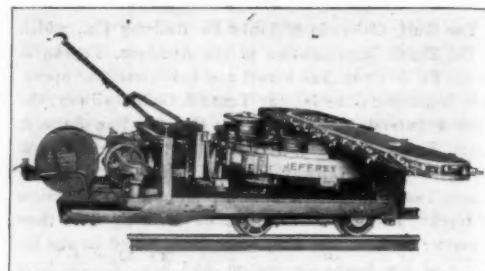
KEYSTONE DIGGER WITH SCOOP REVERSED.

cally the same manner as larger steam shovels. By removing the dipper sticks and changing the tackles, the skimmer scoop, which is carried on rollers that slide along the boom, because of its flat bottom, is adapted for work requiring a smooth surface, such as street grading, etc. The ditching scoop, which is shown in the illustration, differs from the dipper and skimmer types, and is used in making ditches for sewers, water mains, etc. It will dig a ditch from 15 to 44 inches wide and from 6 to 8 feet deep. In operation, the action of the scoop is reversed for ditching, the scoop being carried on a hinged arm at the extremity of the boom with the machine moving backward as the ditch is completed. The weight of the complete machine is about 16,000 pounds, and two men are required to operate it.

Jeffrey "Arcwall" Coal Cutters.

An advanced step in the method of mining coal, and one which is claimed to be an innovation in the mining of bituminous coal in this country, is illustrated by the use of the locomotive turret type of "Arcwall" coal cut-

ters for overcutting system of mining which has been developed by the Jeffrey Manufacturing Co., Columbus, O. The "29-B" locomotive turret type coal cutter, as shown in the accompanying illustration, with cutter-head pivotally mounted, will operate in coal, dirt or shale bands, and is adjustable in the various directions

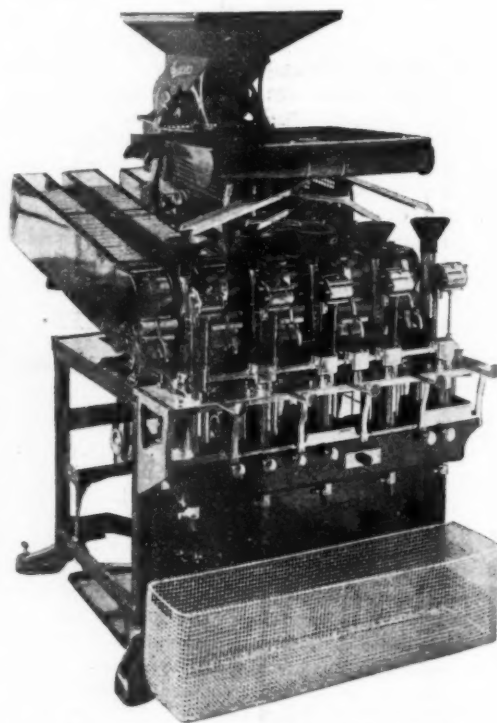


TURRET "ARCWALL" COAL CUTTER.

necessary for overcutting system of mining in rooms up to 20 feet in width. The machines have an adjustment of from 12 to 24 inches, depending on height of coal, and are self-propelled, with speed travel up to 3½ miles per hour. "Arcwall" coal cutters are illustrated and described in bulletin 120 issued by the Jeffrey Manufacturing Co.

Sattley Coin Handling Machine.

An automatic machine for assorting coins into packages corresponding to the various denominations has been developed and is manufactured by the Sattley Coin Handling Machine Co. of Detroit, Mich. This machine is particularly designed for use by companies having large quantities of small coins to handle, such as street railways, gas and electric companies, department stores, banks, water companies, moving-picture theaters, etc.



AUTOMATIC COIN ASSORTING AND COUNTING MACHINE.

The machine is shown in the accompanying illustration. The miscellaneous lot of coins is thrown into the hopper of the machine, which is operated by a small motor manufactured by the Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa. It is stated that the use of the machine cuts down the time required to handle money and reduces the cost considerably, and also eliminates errors in counting. After the coins are assorted into their respective denominations they are wrapped into standard packages or run into bags, as may be preferred, requiring no further counting.

In June 22 cargoes of coal, aggregating 113,454 tons, were cleared from Baltimore, 13 cargoes for European ports.

Construction Department

IN ORDER TO FOLLOW UP

Properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and in some items it is found advisable to make statements as "reported" or "rumored," and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be written on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the postoffice will generally be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur, as our reports are often published before new companies are known and before they have any established office for the receipt of mail.

WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular. In most instances a return postal card or addressed and stamped envelope should be enclosed with letter.

In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

DAILY BULLETIN

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year.

All advertising contracts in the Manufacturers Record for three months or longer include a subscription to the Daily Bulletin for the contract period, as well as a subscription to the Manufacturers Record.

BRIDGES, CULVERTS, VIADUCTS

Ala., Pine Hill.—Gulf, Florida & Alabama Ry., G. A. Berry, Ch. Engr., Pensacola, Fla., is reported to construct bridge across Alabama River at Pine Hill.

Ark., Mena.—Missouri, Arkansas & Southwestern R. R. Co. will construct two one-span bridges over Caddo River and one four-span bridge over Ouachita River. Address G. H. Thayer, Mena.

Ark., Scott.—Pulaski county will construct 20-ft. reinforced concrete highway bridge over Scott Bayou near Scott; bids until July 7; C. G. Doyle, County Highway Engr. (See Machinery Wanted.)

Fla., Arcadia.—Dist. No. 5 of DeSoto County (including Zolfo) voted \$350,000 bonds to construct bridges and roads; H. E. Anschutz, Highway Engr. (Lately noted.)

Fla., Jacksonville.—Duval county votes Aug. 4 on \$250,000 bonds to build 11 reinforced concrete highway bridges. Address County Commrs. (See Road and Street Work.)

Ind., Winnsboro.—Franklin-Parish Police Jury let contract Vincennes Bridge Co., Vincennes, Ind., at \$537 to construct 5 steel bridges.

Mo., Lonaconing.—City invites bids until July 10 to construct bridge over Georges Creek; lately noted to have voted \$8000 bonds; Wm. Harvey, City Engr. (See Machinery Wanted.)

Mo., Independence.—Jackson County Commissioners let contract Phillips & Winfrey, Buckner, Mo., at \$14,831 to build concrete approaches to complete bridge over Missouri Pacific crossing on Sni-a-Bar Rd.

Mo., Waynesville.—Pulaski County Commissioners let contract Canton Bridge Co., Kansas City, Mo., at \$675 to construct bridge near Richland; 2 steel spans, each 119 ft. long; concrete piers; E. A. Bryant, Engr., Dixon, Mo. (Call for bids lately noted.)

N. C., Elizabethtown.—J. R. Adams & Co., contractors, let subcontract J. M. Holbs, Greensboro, N. C., to build 750 ft. pile trestles on 2 mi. extension of Virginia & Carolina Southern R. R. between Elizabethtown and Browns Landing on Cape Fear River.

S. C., Charleston.—Carolina, Atlantic & Western Ry., W. R. Bonsai, Prest., Hamlet, N. C., has plans approved by War Dept. for

drawbridge across Santee River near Lenoir's Ferry.

Tenn., Sevierville.—Sevier county will construct 3 bridges: 180-ft. span across West Fork, Pigeon River; 60-ft. span across East Fork, Pigeon River; 30-ft. span across Dumblin Creek; invites plans and bids on both steel and concrete structures until July 7; H. C. Butler, Chrmn. Road Com. (See Machinery Wanted.)

Tex., Angleton.—Brazoria county will construct 3 steel and wood bridges at Bernardo, Hinkle's Ferry and Churchill's Ferry; bids until July 13; J. W. Munson, County Judge. (See Machinery Wanted.)

Tex., D'Hanis.—Medina County Commrs., Hondo, Tex., let contract Austin Bros., Dallas, at \$1175 to construct 60-ft. steel bridge across Seco Creek, 6 mi. from D'Hanis.

Tex., Houston.—Harris county will construct 7 concrete bridges for Pasadena and Collier's Corner Rd.; bids opened June 29; H. L. Washburn, County Auditor.

Tex., Houston.—Harris county will construct culverts, including necessary grading at End St., Brooksmith Addition; bids until July 13; H. L. Washburn, County Auditor. (See Machinery Wanted.)

Tex., Humble.—Harris county let contract A. A. Alsbury & Sons, Houston, at \$12,946 to construct steel bridge; H. Washburn, County Auditor.

Tex., Marble Falls.—City, R. E. Johnson, Mayor, contemplates steel or reinforced concrete bridge 16 ft. wide. (See Water-power Developments.)

Tex., Matador.—Motley County Commrs. let contract Austin Bros., Dallas, at \$12,000 to construct steel bridge across Middle Pease River.

Tex., Waco.—McLennan County Commrs. let following contracts for bridge construction: McCall-Moore Engineering Co., Waco, \$81,226.40; Richard Morey, St. Louis, \$39,899.64; R. J. Windrow, County Engr., prepared specifications. (See Road and Street Work.)

W. Va., Parkersburg.—Hermann Laub, Pittsburgh, Pa., engaged as engineer in charge of constructing bridge across Ohio River; steel and concrete; crescent block floor; channel span of suspension type. (Parkersburg Dist. of Wood county lately noted voting \$175,000 bonds to assist in building bridge.)

CANNING AND PACKING PLANTS

Fla., Eagle Lake.—Eagle Lake Packing Co., capital stock \$10,000, inceptd. by S. D. Creel, J. L. Gaskins, E. B. Way, A. M. Davis and others.

Fla., Roberts.—Roberts Canning & Creamery Co., Geo. O. Voorhees, Prest., Box 331, Pensacola, Fla., will operate canning plant and creamery; cost of machinery, \$1200; daily capacity, 5000 to 6000 cans canned goods and 200 gals. milk; company (lately noted at Fla., Pensacola) being organized by A. T. Barkdull and others. (See Machinery Wanted.)

Ky., Science Hill.—Science Hill Canning Co. (lately noted inceptd., capital \$6100) has completed building and is installing machinery; cost of building and machinery, \$5500; can tomatoes, pumpkins and sweet potatoes; W. H. Lyon, Prest.; Dr. Marion Warren, V.-P.; M. A. Dodson, Secy.; M. B. Hines, Treas.

La., St. Martinville.—Edward Bullard will establish cannery.

Md., Baltimore.—Kingan Provision Co., 355 Guilford Ave., will remodel plant; Archt., Chas. M. Anderson, 324 N. Charles St.

S. C., Rock Hill.—York County Live Stock Asso., T. L. Johnston, Prest., is interested in securing establishment of packing plant.

CLAYWORKING PLANTS

Fla., Daytona.—Bricks.—J. L. Devenny purchased for Northern capitalists property of Colee estate, comprising 266 acres; includes marsh land extending 1½ mi. along canal, with average width of 500 or 600 ft., containing strata of clay; proposed to install plant with daily capacity of 25,000 bricks.

Ga., Athens.—Hollow Block, Tile, etc.—Georgia Clay Products Co., 806 Holman Bldg., will manufacture hollow block, fireproofing, tile, pottery, etc.; W. L. Childs, Prest.; F. E. Varner, Secy.; W. A. Harsha, Mgr. (Lately noted inceptd., capital stock \$140,000, and to improve and operate plant of Georgia Brick Co.)

Md., Baltimore.—Tiling.—Tileline Co. of America, McCall & Clark, Engrs., 101 4th Ave., New York, contemplates establishing branch factory at Baltimore or Norfolk for Southern distribution.

N. C., Oxford.—Brick and Tile.—H. M. Shaw will establish brick and tile plant; operate as Oxford Brick and Tile Works; ordered machinery, which includes concrete brick machinery with power mixer, conveyors, etc.; is erecting 100x32-ft. building and sheltered yard; product concrete bricks, tile, etc., fancy and plain; steam-cured process and handled on cars; automatic arrangements.

COAL MINES AND COKE OVENS

Ky., Hazard.—East Tennessee Coal Co., H. J. Davis, Prest., Knoxville, Tenn., contemplates daily output 1000 tons from previously-noted 2000 acreage; will install electrical equipment; date opening machinery bids is indefinite; asks machinery prices; F. C. Richmond, Secy.; W. E. Davis, V.-P. and Mgr., Hazard, and Jellico, Tenn. (See Machinery Wanted.)

Ky., Williamsburg.—Letz Jellico Coal Co., capital \$100,000, inceptd. by J. W. Latham, J. Robert Zimmerman and C. N. Smith.

S. C., Charleston.—Dry Fork Coal & Timber Corp. increased capital stock from \$45,000 to \$300,000.

W. Va., Peel Tree, R. F. D. from Volga.—Little Fountain Coal Co., authorized capital \$500,000, inceptd. to mine coal.

W. Va., Skelton.—West Virginia Coal Mining Co. organized; E. S. Simpson, Prest.; J. L. Moon, Secy.; M. L. Norvell, Treas.; T. R. Ragland, Mgr.; will develop 335 acres coal land; daily capacity, 400 tons coal; lately noted inceptd., \$20,000 capital; main office at Richmond, Va. (See Machinery Wanted.)

CONCRETE AND CEMENT PLANTS

Mo., St. Louis.—Universal Concrete Co., capital \$400, inceptd. by P. P. Halsey, Jas. E. Cates and Jos. V. Fennell.

COTTON COMPRESSES AND GINS

Ala., Florala.—R. G. Hoover & Co., Lakeland, Fla., let contract B. H. Farmer to

build gin. (R. G. Hoover and others lately noted as organizing company with \$10,000 to establish gin.)

Ala., Huntsville.—Farmers' Cotton Oil & Fertilizer Co. will erect 8-70-saw gin plant. (See Ala., Madison.)

Ala., Madison.—Farmers' Cotton Oil & Fertilizer Co., Huntsville, Ala., will erect eight 70-saw gin plants at Madison and Huntsville; daily capacity 250 to 300 bales cotton; capacity of Huntsville plant to be doubled; also erect sulphuric acid plant; annual capacity 10,000 to 15,000 tons sulphuric acid; total cost \$75,000 to \$100,000; Peter S. Gilchrist, Engr., Charlotte, N. C. (Contract for plant at Madison lately noted let.)

Ark., Yarbrough.—Bertig Gin Co., capital \$10,000, inceptd.; S. S. Sternberg, Prest.; Jas. Ungar, Secy., Treas.

Fla., Madison.—Company is being organized to establish gin; R. L. Milliner, M. A. Williams and C. F. Hamilton comprise building committee.

Ga., Madison.—Farmers' Cotton Oil & Fertilizer Co. will build gin; eight 70-saw double gin equipment; D. M. Trotter in charge of construction; Burns Kelley in charge of installation.

Ga., Warwick.—Warwick Gin Co. let contract to J. B. Boyers to erect 20x66-ft. cotton sheds; cost \$1000; cost of machinery (purchased) \$4000. (Lately noted.)

Ga., Soperton.—G. A. Sammons will install \$9000 gin; electric lighting.

N. C., Fayetteville.—Walter Ewing will rebuild burned ginhouse.

N. C., Wake Forest.—Union Gin & Warehouse Co., capital \$50,000, inceptd. by G. W. Shearon, J. R. Freeman, H. W. Ferguson and others.

S. C., Jonesville.—Jonesville Oil Mill, E. F. McWhirter, Prest., will rebuild ginney lately noted burned; erect 40x60-ft. ordinary construction building by company force; purchased equipment, cost about \$3500; needs steel tank and tower; probably install sprinkler system over entire plant. (See Machinery Wanted.)

S. C., Mayesville.—Mayesville Gin Co., capital \$15,000, inceptd. by J. F. Boland and H. C. Boland.

Tex., Bowie.—Malone Gin Co., capital stock \$10,000, inceptd. by C. R. Morgan, J. W. Malone and W. T. McNeill.

Tex., Ferris.—Merchants & Planters' Gin Co., capital stock \$16,000, inceptd. by J. V. Metz, T. G. Cole and J. A. Carpenter.

Tex., Galveston.—Merchants & Planters' Compress & Warehouse Co. now grading site in order to begin construction plant recently mentioned; buildings to cover 72x640 ft.; latest type fireproof construction; reinforced concrete walls separating compartments for cotton storage; metal skylights and windows; reinforced concrete fire doors designed by John R. Fordyce; separate compartments, each for 1000 bales cotton; storage shed for 75,000 bales; unloading sheds for 12,000 bales; automatic sprinkler system; electrical railway for handling cotton; buildings to cost about \$300,000; Gilsonite Construction Co., St. Louis, is building contractor, V. H. Clarke in charge, at Galveston; John R. Fordyce, Hot Springs, Ark., is Engr.-Archt.; Webb Press Co., Minden, La., is contractor for compress equipment. (Lately noted.)

Tex., McKinney.—Farmers' Gin Co., capital stock \$10,000, inceptd. by J. D. White, W. Sweeney and Ollie Hall.

Tex., Victoria.—Farmers' Mill & Gin Co. inceptd. by F. B. Lander and others. (See Flour, Feed and Meal Mills.)

Tex., Venus.—Farmers' Gin Co., capital stock \$12,000, inceptd. by W. S. Shirley, W. E. Poleson and J. D. Kuggle.

COTTONSEED-OIL MILLS

Ala., Attalla.—Attalla Oil & Fertilizer Co., capital stock \$50,000, organized with C. B. Forman, Prest.; W. F. Stowers, V.-P.; Lamar Smith, 2d V.-P.; C. B. Perkins, Secy.; A. O. Matthews, Treas.; N. B. Ware, Asst. Treas.; secured 6-acre site on which to build cottonseed-oil mill and fertilizer factory. (Previously noted.)

Ark., Mulberry.—Crawford County Cotton Oil Co., capital stock \$60,000, inceptd.; Geo.

Ill. Walker, Prest.; R. E. Lillard, Secy.-Treas.

Ga., Macon.—Cotton States Feed & Fertilizer Co., W. M. Hutchinson, Prest. and Gen. Mgr., let contract American Machine & Mfg. Co., Greenville, S. C. (and Charlotte, N. C.), to design and equip 4-press oil mill lately noted to be erected; arranged for increasing to 6-press capacity; seed cleaning, hulling, separating and pressroom machinery manufactured by contractor; linting, power and transmission machinery also to be installed.

Tex., Corpus Christi.—Corpus Christi Cotton Oil Co. has now elected following officers to serve one year: J. C. Baldwin, Prest. and Mgr.; Judge H. D. McDonald, V.-P.; C. D. Moody, Secy. (Lately noted inceptd., \$80,000 capital stock; plant erected and equipped.)

DRAINAGE SYSTEMS

Miss., Senatobia.—Commrs. Senatobia Creek Drainage Dist. let contract A. C. Miller at about \$15,000 to construct 2 canals, 1 on each side of valley; 1 canal to be 7½ mi. long and other 5 mi.; district comprises 4000 acres.

Tex., Angleton.—Angleton Drainage Dist. postponed election, lately noted to be held June 13, for 30 or probably 60 days; will vote on \$80,000 bonds for drainage. Address County Commrs.

Tex., Cuero.—Cuero Drainage Dist. of DeWitt county voted \$30,000 bonds for drainage system. Address County Commrs. (Lately noted.)

ELECTRIC PLANTS

Ala., Cullman.—City voted on \$30,000 light and water bonds. Address The Mayor.

Ala., Dadeville.—J. Fletcher Turner, Route 2, will install small electric-light plant. (See Machinery Wanted.)

Ala., Gurley.—Gurley Light & Power Works, H. A. Smith, owner, will rebuild plant reported burned; building of ordinary construction; install 40 H. P. engine, 60 K. W. generator, 50 H. P. boiler, 50 H. P. oil engine, etc. (See Machinery Wanted.)

Ala., Huntsville.—E. C. Dillon and others petitioned City Commrs. for 30-year franchise to furnish electric power and natural and manufactured gas; electricity to be transmitted from Hales Bar (Tenn.) hydro-electric development of Chattanooga Tennessee River Power Co.

Ala., Jackson.—City plans to issue bonds to erect electric-light plant and water-works; C. W. Boyles, Mayor; lately noted. (See Machinery Wanted.)

Ala., Leeds.—Leeds Light & Power Co., capital \$1000, inceptd.; Thos. W. Martin, Prest.; W. R. Loyd, V.-P., and Wiley Alford, Secy.-Treas., all of Birmingham.

Fla., Tampa.—Stone & Webster Engineering Corp., 147 Milk St., Boston, Mass., secured permit to erect boiler-house and smoke-stack costing \$82,500 at Tampa Electric Co.'s plant; boiler-house to be 2 stories, 68 ft. high, 120x50 ft. of steel and concrete, with fireproof roof. (Tampa Electric Co. lately noted to have increased capital stock from \$100,000 to \$200,000 and as contemplating improvements.)

Fla., Zephyrhills.—Zephyrhills Electric Co. contemplates installing ice plant in connection with electric-light plant.

Ga., Canton.—City voted \$5000 bonds to improve electric-light plant and water-works; Howell Brooke, Mayor.

Ga., Eatonton.—City rescinded recent bond election for light and water bonds; M. S. Shivers, Chmn. Special Com. Light and Water Boards. (Lately noted.)

Ga., Quitman.—City votes in Aug. on \$75,000 to \$125,000 bonds, \$40,000 to be for additions to electric-light plant, etc. Address The Mayor. (See Water-works.)

Ky., Paris.—Paris Gas & Electric Co. increased capital stock from \$75,000 to \$150,000.

Ky., Burkesville.—Geo. H. Greenup will establish electric-light plant and water-works.

Md., Baltimore.—Belvedere Hotel, Wm. H. Hager, Mgr., Charles and Chase Sts., let contract Chatard & Norris, 1415 Continental Bldg., to replace steam apparatus in engine and boiler rooms with electrical-drive machinery; electricity from local transmission; illumination power to be supplied from cables leading in direct from outside and eliminating present electric generators; elevator system to be operated by electrically-driven centrifugal pumps; pumps, refrigeration and vacuum cleaning apparatus and air compressors to operate by electricity; no power to be generated within hotel, except certain steam for heating building, supplying hot water and kitchen and laundry use.

Miss., Meridian.—Meridian Light & Ry. Co. will erect fireproof engine and boiler-rooms; cost \$5500 and \$6500; bids opened July 1; W. G. Shurgar, Archt., Meridian; install 500 H. P. boiler.

Mo., Columbia.—Commercial Club has about completed negotiations with W. J. Delaney, Frank Kidd and J. B. Trescott of St. Louis and F. S. Mordaunt of Chicago for construction and equipment of electric railway, including power-house, etc.

Mo., Kahoka.—City voted \$11,000 bonds for water-works and electric-light-plant extension; H. W. Trump, City Clerk. (Lately noted.)

Mo., Newburg.—Newburg Light & Power Co., capital \$4000, inceptd. by J. O. Harpe, W. F. Houx and John Moore.

Mo., Pilot Grove.—City voted to grant franchise to electric-light company. Address The Mayor.

N. C., Hertford.—City engaged J. B. McCrary Co., Atlanta, Ga., as engineer in charge of constructing electric-light plant; lately noted to have voted \$12,000 bonds.

N. C., Kinston.—City voted \$100,000 bonds to improve electric-light station, etc.; F. J. Fulton, Mayor; lately noted. (See Road and Street Work.)

N. C., Scotland Neck.—City asks bids until July 23 on equipment for lately-noted enlargement of electric-light and power plant; work by city force; L. R. Mills, Jr., Supt.; Wm. M. Platt, Engr., Durham, N. C. (See Machinery Wanted.)

N. C., Winston-Salem.—City defeated \$250,000 bonds for electric-light or heating plant, or both; O. B. Eaton, Mayor. (Lately noted.)

Okla., Mangum.—City is considering bond issue to install electric-light and ice plants. Address The Mayor.

Okla., Mangum.—City contemplates bond issue to erect electric-light plant. Address The Mayor.

PROPOSAL ADVERTISEMENTS

IN THIS ISSUE

PUBLISHED ON PAGES 88 and 89

In order to secure best bids from leading engineers, contractors and investment houses, the proposal advertising columns of the Manufacturers Record are invaluable.

Rate 20 cents per line per issue.

When Proposal Advertisements cannot be sent by mail in time to secure insertion before date for opening bids, please wire advertisement copy by Night Letter.

Proposal Advertising must reach us not later than 9 A. M. Wednesday for publication in issue of that week.

Tex., Dayton.—Dayton Light & Power Co. (A. E. Kerr interested) is reported to build electric-light and power plant.

Tex., Dallas.—City having plans prepared by Smith & Whitney, Dallas, for electric-light plant to be installed in basement of new city building at Main and Harwood Sts.; furnish electric lighting to municipal building, central fire station and ornamental lighting system on Main, Elm and other streets.

Tex., Kirvin.—Young Men's Christian Assn. is considering plans for installation of electric-light system on Main St.

Tex., Marble Falls.—City, R. E. Johnson, Mayor, contemplates erection electric-light plant. (See Water-power Developments and Machinery Wanted.)

Tex., McAllen.—Rio Grande Public Service Corp., capital stock \$80,000, inceptd. by R. L. Lewis, T. J. Powell and D. W. Glasscock.

Tex., Taft.—Taft Gin & Oil Co. is reported to rebuild burned electric plant.

W. Va., Clarksburg.—Clarksburg Gas & Electric Co. is having plans prepared by Sidney B. Martin, Penn Bldg., Pittsburgh, Pa., for power plant; brick and steel; fireproof; 85x90 ft.; cost \$100,000; bids to be received by owner about Aug. 1; power equipment to include boiler-feed pumps, feed-water heaters, condensers, high-pressure steam piping, centrifugal pumps, steam turbines, etc.

FERTILIZER FACTORIES

Ala., Attalla.—Attalla Oil & Fertilizer Co. organized with C. B. Foreman Prest.; secured 6-acre site on which to build fertilizer factory and cottonseed-oil mill. (See Cottonseed-oil Mills.)

Ala., Madison.—Farmers' Cotton Oil & Fertilizer Co., Huntsville, Ala., will erect sulphuric-acid plant; daily capacity 10,000 to 15,000 tons acid. (See Cotton Compresses and Gins.)

Fla., Tampa.—Export Phosphate Co., Mulberry, Fla., plans to construct plant on east side of estuary, reported to cost \$500,000; to include following construction: 1000-ft. pier planned for future extension to 1500 ft.; railway 12 and 18 mi. long, from mines to estuary; pier, railways, etc., reported to cost \$200,000; drying and handling facilities reported to cost \$300,000; company has made agreement with port commissioners and actual construction awaits further Government permission required.

Tex., Houston.—Armour Fertilizer Works (main office Chicago, Ill.) will build fertilizer plant on ship canal, to include mf. of sulphuric acid; cover 6-acre site; annual capacity 30,000 tons fertilizer; cost \$150,000; construction by company's force; purchased lumber, machinery, etc. (Lately noted.)

FLOUR, FEED AND MEAL MILLS

Mo., Kansas City.—Gateway Milling Co., capital stock \$2000, inceptd. by Davis H. Eleanora, A. and Marian M. Kresky.

Mo., Oak Ridge.—Oak Leaf Milling Co., capital \$10,000, inceptd. by Washington Miller, J. W. Kinder and James R. Robinson.

Okla., Sayre.—Sayre Milling Co. will rebuild mill lately burned.

Tex., Victoria.—Farmers' Mill & Gin Co., capital stock \$8000, inceptd. by F. B. Lander, H. E. Rathbone and I. N. Mitchell.

W. Va., Parkersburg.—Peerless Milling Co., Abram Amith, Prest. and Gen. Mgr., let contract to Nurdyke & Marmon Co., 833 W. Morris St., Indianapolis, Ind., to rebuild novelty plant; contracts for machinery placed; construction begun. (Lately noted.)

FOUNDRY AND MACHINE PLANTS

Ga., Atlanta.—Agricultural Implements.—Barwick Hoe & Mfg. Co., capital stock \$25,000, inceptd. by R. E. Davidson, C. J. Davidson, J. W. Barwick and others.

Ga., Atlanta.—Farming Implements.—Moline Plow Co., Moline, Ill., has no intention of building branch works at Macon. (Recent report erroneous.)

Ga., Gainesville.—Pumps.—Automatic Pump Co., capital stock \$10,000, inceptd. by R. N. Major, J. J. Adams and others.

La., New Orleans.—Nut Machinery.—Louisiana Nut & Machine Co., capital stock \$100,000, inceptd.; Sam Blum, Prest.; Jos E. Friend, V.-P.; Jos. Samuel, Secy.-Treas.; to mf. nut cracker, etc.

Mo., Kansas City.—Fans and Blowers.—Hope Fan & Blower Co., capital \$2000, incorporated by J. F. Anna and J. T. Hope.

N. C., Greensboro.—North Carolina Public Service Co. will build workshop for wood-working and other machinery for repairing. Tenn., Nashville.—Pump.—Killman Hydraulic Power Transmission Co. organized by Thos. A. Killman and others to mf. patented valveless hydraulic pump.

Va., Bristol.—Locomotives, etc.—Bristol Machine and Locomotive Works, capital stock \$25,000, inceptd.; Z. T. McKinney, Prest., Walhalla, S. C.; A. R. McKinney, Secy.-Treas., Bristol; acquires and will continue Bristol Machine Works, operating on larger scale; plans to remodel plant and equip to repair and rebuild locomotives and mf. machinery.

W. Va., Wheeling.—Iron Works.—LaBelle Iron Works let contract Blaw Construction Co. of Pittsburgh, Pa., to erect building; structural steel; 158x35 ft.; steel pillars, 25 ft. apart, to support each side of structure; electric crane; reported cost \$10,000.

GAS AND OIL ENTERPRISES

Ala., Huntsville.—E. C. Dillon and others petitioned City Commrs. for 30-year franchise to furnish natural and manufactured gas and electric power.

Fla., St. Petersburg.—Gas Plant.—City let contract Frank Stamm at \$12,000 to lay gas

pipes for municipal gas plant, for which \$148,000 bonds have been voted; J. B. McCrary Co., Engr., Atlanta, Ga. (Further facts lately noted.)

Ga., Cedartown.—Gas Plant.—City granted franchise American Gas Utilities Co., Atlanta, to install gas plant.

Ky., Louisville.—Southern Oil & Gas Co., capital \$30,000, inceptd. by John R. Draper, R. L. Mudd, Abel L. Allen and Frank J. Turnbull.

Ky., Paris.—Gas.—Paris Gas & Electric Co. increased capital from \$75,000 to \$150,000.

Md., Cumberland.—Distributing Station.—Standard Oil Co., 26 Broadway, New York, is reported to have option on building to be remodeled for shipping depot and offices; plans include construction of several steel oil tanks equipped with safety appliances; reported cost improvements, \$50,000.

Mo., St. Joseph.—Central Oil & Gasoline Co., capital \$6000, inceptd. by H. A. Chapman, J. A. Graham and Modena Newman.

N. C., Shelby.—Acetylene Gas.—North Carolina Acetylene Light Co., capital \$10,000, inceptd. by J. D. Huggins and J. W. Biggs of Shelby, G. H. Logan and G. R. Ware of Kings Mountain, N. C.

Okla., Madill.—Guadaloupe Oil & Gas Co., capital stock \$10,000, inceptd. by C. A. Coakley and R. A. Rabon of Madill and W. I. Nicholson of Muskogee.

Okla., McAlester.—City voted to grant natural-gas franchise to McAlester Gas & Coke Co. to furnish city with natural gas; has contract with Gladys Belle Oil Co. of Tulsa and Okmulgee to pipe gas from nearest wells. (Lately noted.)

Okla., Muskogee.—Oklahoma Producing Oil Co., capital stock \$15,000, inceptd. by W. N. Jackson, M. G. Young, W. G. Gibbons and Jas. L. Powell.

Okla., Oklahoma City.—Quit It Oil Co., capital stock \$10,000, inceptd. by C. F. Powell, H. G. Oliver and others.

Okla., Shawnee.—Milner-Wells Oil Co., capital stock \$10,000, inceptd. by W. K. Dunn and W. A. Ephland of Shawnee and J. C. Milner of Okmulgee.

Okla., Tulsa.—Little Dog Petroleum Co., capital stock \$20,000, inceptd. by Geo. Kiskaddon, Claude H. Priddy and R. I. Reid.

Okla., Tulsa.—Pyramid Oil Co., capital stock \$25,000, inceptd. by W. M. Walker, G. R. McCullough and S. De Zell Hawley.

Okla., Tulsa.—Beaver Petroleum Co., capital stock \$25,000, inceptd. by Albert Brown, J. A. Hodson and E. L. Talman.

Okla., Tulsa.—Catoosa Petroleum Co., capital stock \$10,000, inceptd. by W. F. Nichols, Ray Curry and D. R. Neptune.

Okla., Tulsa.—Hojoco Oil Co., capital stock \$30,000, inceptd. by Cyrus Avery of Tulsa, C. R. Jones and R. W. Coleman of Kansas City, Mo.

Okla., Tulsa.—Beaver Producing Co., capital stock \$10,000, inceptd. by Albert Brown, H. B. Frederick and E. L. Talman.

Co. voted to expend \$20,000 for improvements Tex., Brenham.—Gas Plant.—Brenham Gas and extension of mains.

Tex., Terrell.—Kaufman County Oil & Gas Co., A. S. Guillet, Secy., 307 Gaston Bldg., Dallas, Tex., will drill oil wells; capital \$25,000; bids opened July 25; J. T. O'Hara, Route No. 2, Terrell, Engr.; August Guillet and others lately noted as leasing 3000 acres oil and gas lands. (See Machinery Wanted.)

Tex., Waco.—Teague Pipe Line & Gas Co. increased capital stock from \$60,000 to \$250,000.

W. Va., Parkersburg.—Jess Whittekind Oil Co., capital \$16,000, inceptd. by J. E. Houke, A. O. Masters, Myer Newberger and others.

W. Va., Parkersburg.—Vienna Oil Co., capital \$25,000, inceptd. by G. W. Sine and H. S. McBride of Parkersburg, Geo. H. Nealy, M. Nealy and J. W. Sollay of Vienna, W. Va.

ICE AND COLD-STORAGE PLANTS

D. C., Washington.—Home Ice Co., 12th and V Sts. N. W., R. S. Miller, Trustee and Mgr., let contract Wm. Kimmel, Evans Bldg., Washington, for alterations and additions to building; cost \$15,800; changing distilled-water system to raw water; installing 175 H. P. water-tube boiler, stoker and fuel economizer; has built 125-ft. brick smoke-stack. (Lately noted.)

Fla., Kissimmee.—Kissimmee Ice & Cold Storage Co. contemplates installing additional machinery and increasing capacity from 15 to 30 or probably 40 tons.

Fla., St. Augustine.—City is considering construction of ice plant. Address The Mayor.

Ky., Hardin.—L. C. Starks, Mayor, interested in proposed ice plant of 4 to 6-ton capacity. (See Machinery Wanted.)

Mo., Salisbury.—Salisbury Sanitary Ice Supply Co., capital \$12,000, inceptd. by Henry Jacobs, T. H. Edwards and F. M. Leach.

Okla., Mangum.—City is considering bond issue to install ice and electric-light plants. Address The Mayor.

Okla., Miami.—Miami Ice Co., capital stock \$15,000, inceptd. by E. B. Lawson, H. G. Betenshaw and Frank Hancock, all of Nowata.

Tenn., Chattanooga.—Barker & Tarlin, Columbia, Tenn., contemplate establishing cold-storage plant.

Tenn., Jonesboro.—Home Ice & Coal Co., capital \$60,000, inceptd. by W. J. Exum, W. A. Owen, W. E. Hunter and others.

Tenn., Nashville.—Nashville Cold Storage & Ice Co., Edgar Ziellian, V. P. and Engr., has plans for daily ice capacity of 150 tons and cold-storage capacity of 2,500,000 cu. ft.; 366x138 ft. main building; reinforced concrete construction; other facts lately noted. (Recent mention of G. O. Swingley as Gen. Mgr. was an error.)

Tex., Waelder.—Waelder Ice Co., capital stock \$6000, inceptd. by R. D. Miller, J. C. Henderson and P. D. Davis.

W. Va., Ronceverte.—Ronceverte Ice & Storage Co., capital stock \$50,000, inceptd. by A. E. Johnson, W. E. Deegans, C. H. Thompson and others.

IRRIGATION SYSTEMS

Tex., Abilene.—Brazos River Irrigation Co. will construct dam across Clear Fork of Brazos River, 14 mi. north of Abilene; use water for irrigation. (Lately noted inceptd., under Dallas, with \$7000 capital stock, by C. J. Thomas and others.)

Tex., Blessing.—Farmers' Canal Co. contemplates constructing irrigation system to water 15,000 acres; receive supply from Tres Palacios River.

LAND DEVELOPMENTS

Ala., Birmingham.—Felix Land Co., capital stock \$2000, inceptd.; J. DeB. Hooper, Prest.; S. W. Hawkins, Secy.

Ala., Mobile.—Southern Investment & Development Co., capital \$5000, inceptd.; H. S. Hoover, Prest.-Treas.; Bruce L. Hoover, Secy.

Fla., DeSoto County.—Palms Land Co., 318 Long Bldg., Kansas City, Mo., inceptd.; capital \$8000; H. C. Shimp, Prest. and Treas.; Jas. A. Jackson, Secy.; develop about 8000 acres in DeSoto county near Lake Okechobee.

Fla., DeSoto County.—Lakeport Land Co., 318 Long Bldg., Kansas City, Mo., inceptd., capital stock \$6000; will develop 240 acres land in DeSoto county, adjoining Lake Okechobee; H. C. Shimp, Prest. and Treas.; W. W. Marquis, Secy.; in developing may want sand and dredgers and ice plant. (See Machinery Wanted.)

Fla., Fruitland Park.—Florida Development Co., capital stock \$90,000, inceptd. by E. H. L. Page, Fruitland Park, and Thos. H. Harter, G. Willard Hall, Geo. E. Hawes and Geo. T. Bush, all of Bellefonte, Pa.

Ga., Kirkwood.—Geo. L. Walker and others will develop 50 acres for residential section; pave streets and sidewalks, lay curbing, install sewer and water systems; W. J. Nalley, C. E., Austell Bldg., Atlanta, will make surveys and supervise development.

Mo., Kansas City.—Lakeport Land Co., 318 Long Bldg. (lately noted inceptd.), will develop land in Florida. (See Fla., DeSoto County.)

Mo., Kansas City.—Palms Land Co., 318 Long Bldg. (lately noted inceptd.), will develop land in Florida. (See Fla., DeSoto County.)

N. C., Asheville.—Central Development Co., 10 Park Square, organized; C. N. McCormick, Prest.; L. H. Trippett, Secy.-Treas.; has 16 acres city property and will develop as residential section; improvements include macadam streets, sidewalks, sewers, water-casks, etc.; cost \$10,000 to \$12,000; construction proposals now open. (Lately noted purchasing and to develop Padgett property.)

N. C., Asheville.—Mount Pleasant Park Co. (lately noted inceptd., capital stock \$35,000, by H. W. Plummer, F. W. Weaver, E. L. Ray and J. G. Sticklethorpe) will develop 58 acres near Grove Park Inn; officers not elected; character of improvements not decided.

N. C., Eagle Springs.—B. F. Butler purchased 400-acre tract and will develop for farming; erect concrete dwelling and tenant-house.

N. C., Sulphur Springs.—Sulphur Springs Park Realty Co., capital \$20,000, inceptd. by O. B. Schoenfeld, Otto T. Maier and J. M. Chiles.

Okla., Bartlesville.—City postponed indefinitely lately-noted vote on bonds for park purposes; may be held in October or November.

Okla., Boynton.—Boynton Improvement Co., capital stock \$1000, inceptd. by J. W. Mulhall, D. R. Skillern and J. W. Crawford.

Okla., Muskogee.—Muskogee Farm Co., capital stock \$2500, inceptd. by Harry Bowman and Chas. P. Gotwals of Muskogee and R. H. Holloway of Wainwright, Okla.

S. C., Union.—City will engage landscape architect to prepare blueprints for city park; improvements to include swimming pool; L. C. Wharton, Mayor.

Tenn., Memphis.—Peabody Improvement Co., capital \$10,000, inceptd. by W. F. Schulz, Harry A. Burke, J. L. Lancaster and others.

Tex., Fort Worth.—Lawn Place Home Co., capital stock \$5000, inceptd. by Harry A. Hurt, W. E. Elliott and C. D. Hart.

Tex., Houston.—Monte Christo Land Co., capital stock \$10,000, inceptd. by William Houck, E. D. Smith and George Hamman.

Va., Bristol.—Interstate Land Corp., capital \$25,000, inceptd.; A. L. Osborne, Prest.; F. H. Miller, Secy.

Va., Petersburg.—Sycamore Terrace, capital \$50,000, inceptd.; Geo. W. Harrison, Prest.; G. D. Craig, V. P.; Paul Pettit, Secy.

Va., Richmond.—Consolidated Development Corp., capital \$50,000, chartered; Henry T. Hutchinson, Prest.; Stacy Bacroft, Secy.

LUMBER MANUFACTURING

Ala., Huntsville.—E. L. Kendall & Co., Jas. L. Kendall, Mgr., will rebuild plant lately noted burned; sawmill to mfr. cedar lumber and squares; capacity about 5000 daily; needs machinery. (See Machinery Wanted.)

Ala., Tuscaloosa.—Cunningham & Floyd Lumber Co. is reported as contemplating rebuilding plant burned at loss of \$15,000 to \$20,000.

Ala., Winfield.—Columbus Lumber Co., Columbus, Miss., purchased 13,500 acres timber land in West Alabama and contemplates development.

Ark., Sparkman.—Doston Lumber Co. is reported to build planing mill.

Ark., Dierks.—Dierks Lumber & Coal Co. is reported to build mill.

Fla., Clearwater.—J. J. Mendenhall and John S. Wyatt will rebuild planing mill, etc., burned at loss of \$60,000. (See Woodworking Plants.)

Fla., Palatka.—P. L. Sutherland purchased Melton Lumber Co. sawmill; will enlarge.

Ky., Roxana.—McGone Bros., Morehead, Ky. (lately noted as McGone Lumber Co.), is establishing stave mills near Roxana; does not mfr. lumber. (See Woodworking Plants.)

La., Natchitoches.—Manchac Lumber Co., Plaquemine, La., will build saw and shingle mills; Frank Glenn to supervise erection and be in charge of mill.

Miss., Shuqualak.—Usher Bros. will rebuild sawmill burned at estimated loss of \$25,000.

Mo., Valley Park.—Valley Park Lumber Co., capital \$15,000, inceptd. by Guy Stone, Wm. T. Vance and W. J. Vance.

Okla., Thomasville.—Burer Lumber Co., capital stock \$10,000, inceptd. by W. R. Burer of Thomasville, R. Kobel and Carnell Wheeler, both of Sallisaw, Okla.

S. C., Charleston.—Dry Fork Coal & Timber Corp. increased capital stock from \$45,000 to \$300,000.

Tenn., Butler.—Peter-McCain Lumber Co., Geo. W. Peter, Secy.-Treas., Bristol, Tenn., states lately-noted timber tract is in Carter county, near Butler; 2000 acres; oak, poplar, chestnut, white pine and hemlock; not contemplating mfr. at present; later bring timber from Butler to mfr. at Bristol; capacity of Bristol mill, 30,000 to 40,000 ft. daily.

Tenn., Chattanooga.—Pine Mountain Lumber Co., capital stock \$20,000, inceptd. by D. W. Atchison, Lee Coper, Paul Campbell and others.

Tenn., Chattanooga.—Pine Mountain Lumber Co., capital stock \$20,000, organized with D. W. Atchison, Prest., and Lee Cooper, Secy.-Treas.; will develop 2000 acres poplar and oak timber lands; establishing mill on tract and will mfr. timber into material for wagons and automobile rims.

Tex., Conroe.—Delta Land & Lumber Co., I. H. Fetty, V. P., Kansas City, Mo., will erect double band-saw mill; fireproof construction; timber supply comprises 90,000 acres in Montgomery and Walker counties; build main logging road 15 mi. long to supply timber to mill; product to be kiln-dried and handled by overhead trolley system;

lumber to be stored in shed having capacity 10,000,000 ft. (Lately noted.)

Tex., Edgewood.—Farmers' Lumber Co., capital stock \$5000, inceptd. by H. I. Brown, Lee Joyner and A. L. Spradlin.

Tex., Hardin.—S. R. Rabinoff, Prest. Chicago-Texas Timber Co., is reported to build sawmill with daily capacity 40,000 ft.

Va., Richmond.—Heywood Land & Timber Corp., capital stock \$50,000, inceptd.; C. Bolce, Prest.; Jas. Mullen, Secy.

Va., Roanoke.—Roanoke Lumber & Supply Corp., capital \$50,000, chartered; Jos. Keys, Prest.; F. T. Hutson, Secy.

MINING

Ga., Lumber City.—Sand and Gravel.—Eureka Sand & Gravel Co., capital stock \$50,000, inceptd. by O. A. Nix and F. L. Sage, 1416 Hurt Bldg., Atlanta, and W. R. Bush (care of Atlanta Sand & Supply Co.), Atlanta.

Ky., Kitts.—Clover Fork Mining Co., capital \$5000, inceptd. by B. W. Whitfield, George P. Fitz and A. K. Whitfield.

Mo., Neelys Landing.—Stone.—Arnold Stone Co., capital stock \$2000, inceptd. by W. B. Arnold, Edward Healy and Allen L. Oliver.

Ky., Owensboro.—Sand and Gravel.—River Sand & Gravel Co., capital \$10,000, inceptd. by P. A. Yager, Margaret Yager, J. Ed. Deiker and W. L. Deiker.

Mo., Caruthersville.—Sand, etc.—Caruthersville Sand & Supply Co., S. Hays, Prest. (lately noted inceptd., capital stock \$3000), will handle and ship river sand and gravel, coal, brick, lime, concrete blocks, etc. (See Machinery Wanted.)

Tenn., Ducktown.—Copper.—Tennessee Copper Co. has plans for steel shafthouse for Burra shaft; steel shafthouse for McPherson shaft; hoisting engines and air compressors for Burra mine; enlarging Nos. 1 and 2 matte furnaces; bids being secured; also enlarging acid plant to increase production; New York office at 111 Broadway. (Lately noted.)

Va., Richmond.—Granite.—Richmond Granite Co., capital \$25,000, inceptd.; Jas. D. Patton, Prest.; J. T. Wingo, V. P.; Chas. E. Wingo, Secy.-Treas.

MISCELLANEOUS CONSTRUCTION

Ala., Montgomery.—Bay City, Lynn Haven & Northern Ry. (H. G. Flak of New York and others) is reported as contemplating erection of docks and warehouses.

Ark., Lake Village.—Levees.—State Engrs., 213 New Orleans Court Bldg., New Orleans, La., let contract R. L. Leonard to construct Whiskey Chute Levee, Stations 2530 to 2562, contents 65,000 cu. yds.; H. T. Van Tausen, Veaucluse South Levee, Stations 2562 to 2640, contents 130,000 cu. yds. (Call for bids lately noted.)

Ga., Augusta.—Levee.—River and Canal Com. is constructing section 3 of levee; sections 1 and 2 about completed; earth fill, about 200,000 cu. yds.; approximate cost \$100,000; Nisbet Wingfield, City Engr.; contract (lately noted) let to A. J. Twigg & Son, Augusta.

La., Baton Rouge.—Wharf.—Standard Oil Co. (main office, 26 Broadway, New York) is reported to have let contract Doullut & Williams, New Orleans, to construct 500 additional feet of wharf in front of plant; provide accommodations for 3 ocean vessels at one time.

La., New Orleans.—Levee.—Board of State Engrs., New Orleans Court Bldg., let contract Thornton Construction Co., McDonoughville, La., at \$24,870 to construct about 100,000 cu. yds. of earth work for levee in Atchafalaya Levee Dist.

La., New Orleans.—Coal Dock.—Louisville & Nashville R. R., W. H. Courtenay, Louisville, Ky.; Illinois Central R. R., A. S. Baldwin, Ch. Engr., Chicago; Alabama Great Southern R. R., C. Dougherty, Ch. Engr., Cincinnati, and New Orleans & Northeastern R. R., A. A. Woods, Res. Engr., New Orleans, are reported as contemplating construction of coal dock to cost, with improvements, possibly \$250,000.

Miss., Vicksburg.—Levee.—Mississippi River Com., Third Dist., will construct 7500 cu. yds. levee work; bids until July 13; J. R. Slattery, Major, Engrs. (See Machinery Wanted.)

N. C., Asheville.—Swimming-pool.—City invites bids on construction of swimming-pool in Aston Park; 30x100 ft.; depth, 3 1/2 to 9 ft.; concrete; concrete walk around structure. Address The Mayor.

S. C., Charleston.—Coal Terminals.—Holston Corp. (Carolina, Clinchfield & Ohio R. R.), Ward Crosby, Ch. Engr., Johnson City,

Tenn., has made agreement with city relative to construction coal terminals on Cooper River; begin work within 60 days from July 1 and complete within two years; construction to include dock 850 ft. long, with deck of concrete cap on concrete piles; fill retained by concrete sheet piles; dock anchored to base of concrete tunnel, supported on wooden piles; Mr. Crosby has considered bids on 600,000 sq. yds. dredging required; storage bins to have capacity 650,000 tons coal; capacity for loading vessels to be 1000 tons hourly; plans and specifications by J. W. Frazier Co., Engr., Cleveland, O.; engineer has considered bids on dock; Atlantic Gulf & Pacific Dredging Co., New York, has begun its contract for preliminary work, including large dikes around 70 acres; Mark W. Potter, Chrmn., Carolina, Clinchfield & Ohio R. R., 24 Broad St., New York, is credited with stating that \$1,100,000 will be total of contracts for property and construction of these terminals. (Previously noted.)

Tex., Dallas.—Swimming Pool.—Dallas Country Club is having plans prepared by Harre Bernet for swimming pool.

MISCELLANEOUS ENTERPRISES

Ala., Birmingham.—Dairy.—Five Points Dairy Co., capital stock \$2000, inceptd.; Arthur B. Destutt, Prest.-Treas.; Phares Coleman, Jr., V. P.; Mrs. A. L. Brooks, Secy.

Ala., Mobile.—Printing.—Patterson Printing Co., capital stock \$3000, inceptd. by Wm. J. Patterson, Jas. S. Patterson and Sidney G. Patterson.

Ark., Morrilton.—Printing Plant.—C. E. Cruce, editor Morrilton Democrat, will erect brick building 25x60 ft.; let contract John Patton & Co. of Morrilton.

Ark., McGehee.—Hardware, etc.—City Hardware & Furniture Co., capital \$10,000, inceptd.; Sam Wolchansky, Prest.; G. B. Ewing, Secy.

Fla., Jacksonville.—Steamship Terminals.—Clyde Steamship Co., Pier 36 North River, New York, will undertake terminal improvements, but has not formulated any definite plans.

Fla., Plant City.—Publishing.—East Hillsborough Publishing Co., capital \$4000, will organize with L. I. Bird, Prest.; J. W. Hobbs, V. P.; G. R. Garner, Treas.; J. Fred DeBerry, Secy. and Gen. Mgr.; daily newspaper and job printing.

Ga., Savannah.—Grain Elevator.—N. Y. Bertell, representing C. B. Fox, New Orleans, is reported as contemplating construction elevator to handle grain from Argentina.

La., New Orleans.—Lumber.—Cook-LeCrone Lumber Co., 625 Whitney-Central Bldg., organized by C. A. Cook of Milwaukee, Wis., and C. E. LeCrone; absorbs business of Chas. A. Cook (lately of 823 Chambers St.) and St. Charles Lumber Co.; Mr. LeCrone, at New Orleans office, will represent Southern interests; Mr. Cook to be located in Milwaukee; several mills under contract; make specialty of hardwoods; handle cypress, yellow pine and Western Coast products.

Miss., Clarksdale.—Incinerator.—City, M. J. Bouldin, Mayor, plans to construct garbage incinerator; bids until July 23. (See Machinery Wanted.)

Mo., St. Joseph.—Engraving.—Art Crafts Engraving Co. increased capital stock from \$5000 to \$8000.

N. C., Burton.—Construction.—Jacob's Creek Construction Co., capital \$20,000, incorporated.

Okla., Okmulgee.—Incinerator.—City contemplates installing incinerator plant. Address The Mayor.

S. C., Bluffton.—Steamboat Line.—Savannah & Bluffton Steamboat Co., capital stock \$10,000, inceptd.; J. D. Peoples, Prest.; C. A. Verdier, V. P.; F. Whitney, Secy.; M. B. Peoples, Treas.; operate steamboat line between Bluffton and Savannah.

S. C., Columbia.—Engineer and Contractor. Municipal Improvement Co., John P. Ott, Jr., Secy., 1341 Main St., inceptd.; capital stock \$5000; engineering and contracting.

S. C., Summerville.—Poultry Farm.—Summerville Poultry Farm, capital \$4000, inceptd.; J. A. Burgess, Prest.-Secy.; S. Lord Hyde, Treas.-Mgr.

Tenn., Benton.—Printing.—Copper City Printing Co., capital \$5000, inceptd. by M. C. King, J. J. King, Boone Crawford and A. B. McCoy.

Tex., Bryan.—Publishing.—Southern Farm & Daily Publishing Co., capital stock \$5000, inceptd. by C. M. Evans, M. E. Wallace and J. W. Ridgeway.

Tex., Clarksville.—Laundry.—Clarksville Steam Laundry Co., capital stock \$5000,

inceptd. by Dere Austin, P. J. Graves and J. P. Kunkle.

Tex., Corpus Christi—Crematory.—City, Roy Miller, Mayor, is having plans for lately noted garbage crematory prepared by City Engr. H. A. Stevens; will advertise bids; \$20,000 bond issue.

Tex., Gainesville—Grain Elevator.—Whaley Mill & Elevator Co. will build concrete grain elevator.

Tex., Marble Falls—Inclinator.—City, R. E. Johnson, Mayor, contemplates inclinator plant. (See Water-power Developments.)

Va., Norton—Hardware.—Wise Hardware Co., capital \$25,000, inceptd.; E. R. Burks, Pres.; R. C. Chapman, V.-P.; both of Tazewell, Va.; Chas. I. Fuller, Secy.-Treas., Norton.

Va., Petersburg—Stockyards.—M. W. Gill Livestock Co. let contract to E. L. Bass, Petersburg, Va., to erect stockyard buildings; 115x135 ft.; ordinary construction; slag roof; electric lighting; cost \$8000; S. Daley Craig, Archt., Petersburg.

Va., Richmond—Designing, Drafting, etc.—Childrey Co., capital \$10,000, inceptd.; Wayne A. Childrey, Pres.; John C. Kinder, Jr., Secy.

MISCELLANEOUS FACTORIES

Ala., Birmingham—Shirts.—C. L. Sent Shirt Co. is reported to install equipment to mfr. shirts in Woolworth Bldg.

Ark., Hot Springs—Vehicle Top Raiser.—Acme Device Mfg. Co., capital stock \$15,000, inceptd.; L. Cummings, Pres.; Charles R. Fox, V.-P.; S. W. C. Smith, Secy.-Treas.

Ark., Tex.—Texarkana—Marble and Granite. Bryant & Brown have contract to erect brick building for marble and granite works.

Ark., Winchester — Brooms.—Winchester Broom Co., capital \$2500, inceptd.; Hardy Peacock, Pres.; M. W. Byrn, Secy.-Treas.

Fla., Jacksonville—Tires.—Florida Tire Co., capital stock \$25,000, inceptd.; Geo. M. Adams, Pres.; H. M. Woodward, Jr., V.-P.; Geo. M. Hopkins, Secy.; Claude M. Shine, Treas.

Fla., New Smyrna—Fiber.—Palmetto Production Co. of New York is reported to establish plant to mfr. fiber from leaves of saw palmetto.

Fla., Orlando—Cigars.—Curry & Smith Cigar Co. is reported as contemplating erection of building for cigar factory to cost \$5000.

Fla., Roberts—Creamery.—Roberts Canning & Creamery Co., Geo. O. Voorhees, Pres., Box 331, Pensacola, Fla., will operate creamery, etc.; daily capacity, 200 gals. milk; company (lately noted at Fla., Pensacola) being organized by A. T. Barkdull and others. (See Canning and Packing Plants and Machinery Wanted.)

Fla., Tampa—Signs, Indicators, etc.—Flecko Automobile Sign & Indicator Co., capital stock \$25,000, inceptd.; A. B. Filigamo, Pres.; Cirino Latteri, V.-P.; Wm. Humbert, Secy.; Gaetano Ferlita, Treas.

Fla., Ybor City, Station Tampa—Cigars.—Sanchez & Haya Co. will erect addition to factory; 35x35 ft.; plans being prepared.

Ga., Atlanta—Wheels.—Southern Wheel Co., Railway Exchange Bldg., St. Louis, Mo., has plans by Park A. Dallas Co., 913 Candler Bldg., for steel-frame factory; invite bids for erection; structure to be 1 story; 165x300 ft.; steel sides and roof; brick and concrete foundations and curtain walls; concrete and wood-block flooring.

Ga., Augusta—Beds, etc.—Augusta Spring Bed Mfg. Co. organized by W. E. Robinson, J. E. Fowler and E. S. Fuller.

Ga., Lavonia—Bottling.—Georgia Kola Co., capital stock \$100,000, inceptd. by W. C. Mason, W. P. Elrod and others.

La., New Orleans—Silicate of Soda.—Philadelphia Quartz Co., 121 S. 3d St., Philadelphia, Pa., expects eventually to place small distribution plant, for Pacific coast trade, on site lately noted purchased.

La., New Orleans—Sugar Refinery, etc.—Godchaux Co., capital stock \$2,640,000, inceptd.; will mfr. and refine sugar, molasses, syrup, etc.; cultivate sugar-cane, etc.; continue established plant; Chas. Godchaux, Pres.; Paul L. Godchaux, V.-P. and Treas.; W. W. Bouden, Secy.

Md., Baltimore—Distillery.—Hannis Distilling Co., Stockholm and Russell Sts., will erect plant addition; 6 stories; brick; 137x104 ft.

Md., Baltimore—Crushing Plant.—George Long Contracting Co., 1st St. and 1st Ave., Canton, Md., will rebuild plant lately burned; ordinary construction; bids opened Aug. 1; machinery includes stone crusher and electric motor to cost \$3500; machinery purchased; daily capacity 150 tons crushed stone and dust.

Md., Baltimore—Paper Boxes.—Baltimore Paper Box Co., 617-619 W. Pratt St., purchased former plant of Morgan Millwork & Lumber Co. at Howard and West Sts.; site 167x155 ft., improved with 2 factory buildings, one 3 stories high and other 1 story; proposed to build 2 additional stories to latter.

Md., Baltimore—Paints.—MacNeal & Co., Warner and Wooster Sts., will expend \$15,000 to erect 1-story buildings as addition to plant; 40x16 ft., 32x25 ft. and 30x25 ft.; contract (lately noted) let to Consolidated Engineering Co., 213 Calvert Bldg., Baltimore, Maryland.

Md., Baltimore—Shoes.—Gandy Belting Co., 726-740 W. Pratt St., let contract Elkan-Tufts Construction Co., 702 E. Lexington St., to erect building at 719-731 W. Lombard St.; 6 stories and basement; reinforced concrete and brick; 171x144 ft.; to be occupied by M. Samuels & Co., shoe mfrs., 21 S. Hanover St.; plans by Arthur Tufts, Coca-Cola Bldg. (Lately noted.)

Md., Baltimore—Organs.—Adam Stein, 668-672 W. German St., leased former Swan Hotel on Greene St. and will remodel for organ factory.

Mo., Kansas City—Beall Mfg. Co., capital stock \$50,000, inceptd. by B. P. Beall, Edgar L. Evans and J. H. Borders.

Mo., Kansas City—Bottling, etc.—Coca-Cola Co. (main office, Atlanta, Ga.) let contract Swenson Construction Co., Kansas City, to erect building; 12 stories; 165 ft. high; triangular site with frontage 166 ft. on Grand Ave. and 102 ft. on 21st St.; 3 sides to receive same architectural treatment; reinforced concrete construction; flat ceiling type; brick facing with terra-cotta trimmings; about 3 acres floor space; private power plant; install engines, boilers, freight and passenger elevators; Coca-Cola Co. to occupy basement, ground floor under Grand Ave. viaduct and part of third floor; second floor, on Grand Ave. level, for storerooms; other floors to be leased for light manufacturing in diversified industries; estimated cost, \$250,000; plans by Arthur Tufts, Coca-Cola Bldg., Baltimore, Md. (Previously noted.)

Mo., St. Joseph—Novelties.—St. Joseph Calendar & Novelty Co., capital stock \$7500, inceptd. by Chas. Work, John H. Cameron and Earl J. Kearley.

Mo., St. Louis—Bakery.—Jeggles Bakery, capital stock \$15,000, inceptd. by John Jeggles, Geo. Jeggles, Mary Jeggles and others.

Mo., St. Louis—Paper Boxes.—International Wire Stitched Package Co., capital stock \$50,000, inceptd. by Ennis L. Walker, Gaines M. Walker, Arthur J. Fitzsimmons and H. C. White.

N. C., Winston-Salem—Tobacco.—R. J. Reynolds Tobacco Co. has plans by J. E. Sirrine of Greenville, S. C., for sweathouse; 11 stories; 66x194 ft.; 104 ft. high; steel construction; concrete and brick curtain walls; windows, doors and stairways of steel; 6th floor to be insulated to keep out heat from 5 floors above and below, creating sweat-room where tobacco will be brought to condition permitting handling without crumbling; each of other floors of heavy steel slats, permitting even temperature throughout; capacity, 3,400,000 lbs. leaf tobacco; cost \$80,000 to \$100,000; contract to be let about July 7; Earl Maulding, Engr.

Okla., Muskogee—Cigars.—F. W. Zipf will erect addition to plant; 50x100 ft.; install machinery.

Okla., Muskogee—Fountain Supplies.—Muskogee Bottling Works, 119 Times Bldg., organized; Edgar R. Rullison, Jr., Pres.; Irving M. Rullison, V.-P.; Mason F. Jourdan, Secy.-Treas.; mfrs. and distributors of soda water and soda fountain supplies. (Lately noted inceptd., \$6000 capital.)

Okla., North Muskogee—Farm Products.—Farm Products Co., capital stock \$3000, inceptd. by J. B. Wood and Wm. B. Wood, both of North Muskogee, and Jas. L. Powell of Muskogee.

S. C., Sumter—Candy.—Sumter Candy Co., capital stock \$5000, inceptd.; A. L. Prince, Pres.; M. W. McConnell, V.-P.; E. H. McConnell, Secy.-Treas.

Tex., Corsicana—Candy.—O. E. Hyndman Candy Co. is correct name of lately noted company to operate plant; daily capacity about 1000 lbs.; O. E. Hyndman, Pres.; M. M. Miller, V.-P.; E. P. Estes, Secy.

Va., Big Island—Pulp and Paper.—Bedford Pulp & Paper Co., Raymond I. Straus, Secy., Richmond, Va., contemplates rebuilding pulp and paper mill recently burned; estimated to cost more than \$400,000, including machinery and water-power improvements; buildings to cost about \$120,000; daily capacity 55 tons; H. S. Ferguson, Engr., 200 5th Ave., New York.

Va., Basic City—Extracts.—Gardner Extract Co. increased capital stock from \$50,000 to \$100,000.

Va., Portsmouth—Chair Caning.—Norfolk Chair Caning Corp., capital \$10,000, chartered; A. S. Seeley, Pres., Norfolk; Winston Parrish, Secy.

MOTORS AND GARAGES

Ala., Birmingham—Automobiles.—Brownell Auto Co., capital \$10,000, inceptd.; E. H. Brownell, Pres.; C. W. Richardson, Secy.; Blaine Brownell, Treas.

Ark., Morrilton—Garage.—C. E. Cruce, editor Morrilton Democrat, will erect brick building, 30x60 ft., to be occupied as garage by H. G. Farish.

D. C., Washington—Garage.—W. M. Griffiths will erect garage and warehouse; Contr. H. M. Lanford, Oxford Bldg. (See Warehouses under Buildings, Contracts Awarded.)

La., New Orleans—Automobile Works.—Company organized with \$1,000,000 capital stock to build automobile works; runabouts, freight trucks, limousines, gasoline engines, etc., to be manufactured; J. Bart Davis, Pres.; A. C. Vreeland, V.-P.; John Merkl, Jr., Secy.; F. F. Philibert, Gen. Mgr.

Md., Baltimore—Garage.—Garage Building Co., Robert J. Gill, Secy.-Treas., 609-610 Keyser Bldg., purchased site 89x140 ft. on Charles St. near Lafayette Ave.; erect garage and automobile showrooms.

Mo., Kansas City—Motors.—Standard Motor & Mfg. Co., capital stock \$10,000, inceptd. by H. T. Folsom, J. E. Harvey and J. B. Renshaw.

Mo., St. Louis—Automobiles.—Laclede Automobile & Supply Co., capital stock \$50,000, inceptd. by C. S. Clichever, L. J. Curtin, J. J. Miltenberger and Harold Johnson.

N. C., Charlotte—Automobiles.—Auto Supply Co., capital \$10,000, inceptd. by D. H. Hilton and H. B. McGill of Charlotte and E. T. Wadsworth, Erie, Pa.

Tenn., Columbia—Garage.—A. H. Johnson, 913 S. Garden St., contemplates establishment of garage and machine shop; asks prices on equipment. (See Machinery Wanted.)

Va., Alexandria—Automobiles.—Palace Automobile Co., capital \$15,000, inceptd.; Milton S. Fairfax, Pres.; John S. Goodrich, Secy.-Treas.

RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.

Ark., Prescott—Prescott & Northwestern Ry., H. E. Bemis, Mgr., will rebuild machine shop lately reported burned at loss of \$10,000; install new equipment.

Tenn., Jackson—Mobile & Ohio R. R., R. V. Taylor, Gen. Mgr., will make some small shop additions; no details determined. (Lately noted.)

Tex., Mexia—Houston & Texas Central R. R. Co., W. B. Scott, Pres., Houston, Tex., plans to construct roundhouse containing 32 stalls, 12 m. yard track and repair shops by Sept. 1. (Previously noted.)

W. Va., Weston—Baltimore & Ohio R. R. Co. will not build freight depot. (Recent report was erroneous.)

ROAD AND STREET WORK

Ark., Hot Springs.—Garland County Commrs. are reported to have let contract Wm. Murphy to build Little Rock-Hot Springs highway.

Ark., Little Rock.—City will improve Rice St.; F. L. Holt, Secy. Com., 1115 W. Markham St., receives bids until July 6 for excavating, draining, curbing, guttering, lowering sewers and other work on Rice St. from Markham to south line Capitol View Addition; E. C. Buchanan, Civil Engr., 1821 Rice St. (See Machinery Wanted.)

Fla., Arcadia.—Dist. No. 5 of DeSoto county (including Zolfo) voted \$350,000 bonds to construct roads and bridges; H. E. Anschutz, Highway Engr. (Lately noted.)

Ala., Athens.—Limestone county will grade, drain and surface, with gravel, portion of Decatur-Athens Rd., beginning at river; bids until July 27; W. S. Keller, State Highway Engr., Montgomery. (See Machinery Wanted.)

Fla., Fernandina.—Nassau county will complete unfinished portions of Fernandina-Jacksonville highway as follows: 7040 ft. on Nassau River causeway, 2085 ft. in vicinity of Hedges between Hedges and Yulee, 2254 ft. between Yulee and Lofton Creek and 2365 ft. between Yulee and Lofton Creek; bids until July 15; J. W. Keen, Chrmn. County Commrs. (See Machinery Wanted.)

Fla., Jacksonville.—Duval county votes Aug. 4 on \$2,000,000 bonds, of which \$1,500,000 will be for road construction, \$250,000 for 11 reinforced concrete highway bridges and \$250,000 for refunding indebtedness. Address County Commrs.

Fla., Miami.—Dade county will construct 1 mi. rock road; bids until July 7; Z. T. Merritt, County Clerk. (See Machinery Wanted.)

Fla., Tampa.—City will grade, pave and curb various streets; bids until July 7; D. B. McKay, Chrmn. Commrs. Public Works. (See Machinery Wanted.)

Fla., Largo.—City will pave about 1 mi. of streets; J. B. McCrary Co., Atlanta, Ga., to prepare estimates and supervise work. (See Water-works.)

Fla., Miami.—City will grade and pave 16th St. from Ave. J to Miami River with Miami rock; width, 34 ft.; also grade, curb and pave portion of 10th St. with Miami coralline rock; width, 31 ft.; bids until July 2; W. B. Moore, City Clerk. (See Machinery Wanted.)

Ga., Quitman.—City votes in August on \$75,000 to \$125,000 bonds for street sidewalk paving, etc. Address The Mayor. (See Water-works.)

Ky., Lexington.—City will pave streets with brick, asphalt, wooden block, asphalt block, asphalt binder (macadam), granite block or cement as follows: E. 2d St., 9400 sq. yds.; W. 2d St., 4500 sq. yds.; Georgetown St., 11,500 sq. yds.; 4th St., 13,800 sq. yds.; Deweese St., 6250 sq. yds.; Rose La., 5530 sq. yds.; Winslow St., 6000 sq. yds.; S. Limestone St., 6000 sq. yds.; S. Broadway, 5150 sq. yds.; Angliana Ave., 12,425 sq. yds.; N. Ashland Ave., 6250 sq. yds.; also construct cement or brick gutters, cement limestone or granite curb, or cement curb with steel protection, on above streets; bids opened June 29; J. E. Cassidy, Mayor; C. H. Wilkerson, Commr. of Public Works.

Ky., Pikeville.—City will improve streets; issued \$55,779 of bonds; H. S. Damron, City Clerk.

Ky., Somerset.—Pulaski county defeated \$300,000 bonds to construct roads; C. M. Langdon, County Clerk. (Lately noted.)

Ky., Versailles.—City let contract Hancock & Co. of Louisville at \$12,720 to pave with brick 2 blocks on Main St.; C. E. Collins, Engr.

La., Hammond—Highway Dept., Board of State Engrs., Room 194, New Orleans Court Bldg., New Orleans, invites bids until July 15 to construct about 13 mi. road extending east and west through Hammond and Tangipahoa parish; W. E. Atkinson, State Highway Engr.

La., Shreveport.—City will gravel Mansfield Rd., 18 ft. wide, from Greenwood Rd. to city limits; bids until July 14; L. H. Baker, Secy.-Treas. (See Machinery Wanted.)

Md., Baltimore.—Maryland State Roads Com., O. Weller, Chrmn., 601 Garrett Bldg., will build 7 sections State highway; about 26.62 mi. in Allegany, Anne Arundel, Frederick, Garrett, St. Mary's and Talbot counties; bids until July 14. (See Machinery Wanted.)

Mo., Brunswick.—City is reported to have voted \$12,000 paving bonds. Address The Mayor.

Mo., Sedalia.—Jas. R. McAllester has contract to construct 2 1/2 mi. rock road.

Mo., Grant City.—City and Worth county have \$14,000 available to construct 8000 yds. concrete paving; contract (lately noted) let to Universal Concrete Co., St. Joseph, Mo.

N. C., Greensboro.—City let contract Lawrence Building Co., High Point, N. C., at \$1.60 per sq. yd. for concrete paving; 6900 to 8000 sq. yds.

N. C., Hertford.—City engaged J. B. McCrary Co., Atlanta, Ga., as engineer in charge of paving; \$8000 bonds lately noted voted.

N. C., Kinston.—City voted \$100,000 bonds to improve streets and electric-light station and extend sewers; F. I. Sutton, Mayor. (Lately noted.)

N. C., Southport.—Brunswick county will construct roads; \$50,000 available. Address A. M. Chinnis.

N. C., Winston-Salem.—City voted \$50,000 bonds to grade and curb streets; O. B. Eaton, Mayor. (Lately noted.)

Okla., Muskogee.—City Council appropriated \$10,000 to improve roads and \$3000 to improve boulevards. Address The Mayor.

Tenn., Chattanooga.—City will pave with asphaltic concrete, including combined cement curb and gutter and cement sidewalks, roadways of Highland Park Ave., 14th to Main St., Dist. No. 186; Willow St., Main St. to Chamberlain Ave., Dist. No. 145; Willow St., Chamberlain Ave. to Carolina St., Dist. No.

17; bids until July 6; A. N. Sloan, Commr. Dept. Streets and Sewers. (See Machinery Wanted.)

Tenn., Jonesboro.—City voted \$15,000 bonds to improve streets. Address The Mayor.

Tenn., Lewisburg.—City, J. A. Loyd, Mayor, will improve streets; \$20,000 bonds previously noted voted; bids opened June 29; contract let locally; Engr., R. C. Fergus, University of Tennessee, Knoxville.

Tenn., Nashville.—City let contract Southern Asphalt & Construction Co. at \$7259 to pave 5th Ave. from Cedar to Church St. with wood blocks laid in sand on concrete foundation; to Adamant Stone & Roofing Co., Nashville, at \$6520 to pave 5th Ave. from Cedar to Crawford St. with granite.

Tenn., Ripley.—Lauderdale county votes July 14 on \$15,000 bonds for street improvements, concrete walks, etc. Address County Commrs.

Tenn., Oakwood, P. O. at Knoxville.—Town Commrs. will expend \$30,000 to improve streets; let contracts to grade and macadamize Houston and Harvey Aves.; will soon let contracts to curb and gutter other streets.

Tenn., Savannah.—Hardin county votes Aug. 6 on \$240,000 bonds to construct roads; L. L. Harburt, County Clerk. (Lately noted.)

Tex., Austin.—San Antonio-Austin Rd. plans are progressing; contracts have been signed by U. S. Dept. of Agriculture and the several counties through which road passes; survey will soon begin; plans and specifications will be made and bids asked; road probably surfaced with gravel. (Previous items noted Government appropriation of \$89,000, county \$160,000; total \$249,000; road to pass through Travis, Comal, Hays, Bexar and a corner of Guadalupe counties; reinforced concrete culverts and bridges.)

Tex., Bay City.—Road Dist. No. 2 of Matagorda County issued \$100,000 bonds to construct roads. Address County Commrs.

Tex., Beaumont.—Chamber of Commerce let contract to build 2000 ft. of road from river through marsh to Orange mid county road; cost \$6500.

Tex., Belton.—Bell County Commrs. let contract J. F. Hanner to construct roads in Little River and Heidenheimer precincts.

Tex., Corsicana.—Commrs. Road Dist. No. 1 of Navarro county let contract Roach-Manigan Paving Co., Memphis, Tenn., to construct 70 mi. rock roads; Geo. A. Duren, Consult. Engr., Pace Bldg., Corsicana. (Call for bids lately noted.)

Tex., Cotulla.—La Salle county voted lately noted \$40,000 bonds for road construction; C. C. Thomas, County Judge.

Tex., Ennis.—City voted \$35,000 bonds to pave streets; W. D. Farris, Mayor. (Lately noted.)

Tex., Kaufman.—Justice Precinct No. 1 of Kaufman county defeated \$200,000 bonds to construct roads. (Lately noted.)

Tex., Milford.—City will improve streets; cost \$4000; J. M. Goldston in charge. (See Water-Works.)

Tex., Smithville.—City let contract W. C. Moore, Smithville, to grade and gravel about 8 mi. streets; \$10,000 available; D. O. Cogdill, Chrmn. Street and Alley Com. (Lately noted.)

Tex., Floresville.—Road Dist. No. 1 of Wilson county defeated \$60,000 bonds to construct 30 mi. roads. (Lately noted.)

Tex., Yoakum.—City is having surveys, etc., made for paving business section of city with concrete or similar material; W. E. Dickerson, Engr., Yoakum, or Cuero, Tex.; amount available \$40,000; date of opening bids not determined. (Previously noted as voting \$40,000 bonds.)

Tex., Uvalde.—Uvalde county defeated \$180,000 bonds to construct roads. (Previously noted.)

Tex., Waco.—McLennan County Commrs. let following contracts aggregating \$804,271.43 to construct about 175 mi. of road in Justice Precincts Nos. 1 and 3 and various bridges: Ocklander Bros., Waco, 1½ mi. brick, 16 mi. bituminous macadam, .009 mi. concrete, 35 mi. gravel, 13½ mi. sand clay, \$197,381.48; L. H. Pritchett, Waco, 9½ mi. water-bound macadam, 33 mi. concrete, 7½ mi. gravel, \$94,005.13; Flannagan Bros., Waco, 18 mi. water-bound macadam, 1.2 mi. concrete, 11½ mi. gravel, \$129,448.45; Richard Morey, St. Louis, 15 mi. bituminous macadam, 24 mi. gravel, 15½ mi. water-bound macadam, 1.2 mi. concrete, \$262,710.33. Conglneering Co., Waco, at \$30,225.40, and Richard Morey, St. Louis, at \$39,899.64. County to furnish, for roads, gravel and bitumen estimated to cost \$122,413.26. R. J. Windrow, County Engr., prepared specifications;

\$1,075,000 of bonds authorized. (Call for bids lately noted.)

Va., Bristol.—Henry Roberts, Chrmn. Highway Comm., advises that parties interested in Washington county link of Bristol-to-Lexington (Ky.) highway are building by co-operative effort; grading in progress; will macadamize next year from bond issue. (Previously noted as being surveyed.)

Va., Richmond.—City let contract Washington Asphalt Block & Tile Co., 306 7th St. S. W., Washington, D. C., to pave 9th St. from Broad to Grace Sts. with asphalt block; \$3100 appropriated.

W. Va., Beckley.—Raleigh county defeated \$180,000 bonds to construct roads. (Lately noted.)

W. Va., New Martinsville.—Wetzel county, S. Myers, Clerk, will build and improve about 22 mi. dirt road in Grant Dist.; bids until July 18; F. W. Parsons, County Road Engr., New Martinsville. (See Machinery Wanted.)

W. Va., Parkersburg.—Nelson & Meredith, Marietta, O., have contract to pave 4 mi. road in Williams Dist., adjoining Parkersburg.

SEWER CONSTRUCTION

Ala., Birmingham.—City Com. passed ordinance providing for construction of sanitary sewers in East Birmingham north of 43d St.; estimated cost \$18,500; Julian Kendrick, City Engr.

Ala., Mobile.—City let contract Jett Bros. Contracting Co., Mobile, at \$13,221 to construct storm sewers in connection with 12th paving venture; 19,500 ft., 6 to 24 in.; 36 manholes, 60 inlets and 12 special basins; Wright Smith, City Engr. (Call for bids lately noted.)

Ark., Benton.—City, R. C. Bailey, Mayor, will construct lately-noted sewer and water-works system; cost about \$60,000; open bids about Nov. 1; E. A. Kingsley, Engr., Little Rock, Ark.

Ark., Siloam.—City contemplates forming improvement district to build sewer system. Address The Mayor.

D. C., Washington.—Commrs. let contract Warren F. Brenzler Co., 411 Q St. N. W., to construct sewer in Wisconsin Ave., and to R. B. Werner, Willow Grove, Pa., sewers in Woodbridge and Foxhall Rds.

Fla., Dade City.—City voted \$6500 bonds to construct sewer system. Address The Mayor. (Lately noted.)

Fla., Largo.—City will construct sewer system; J. B. McCrary Co., Atlanta, Ga., to prepare estimates and supervise construction. (See Water-Works.)

Fla., Leesburg.—City is considering construction of sewer system. Address The Mayor.

Fla., Perry.—City will construct sewer system and water-works; plans prepared; C. L. Brandon, City Clerk.

Ky., Lexington.—City let contract Louis Des Cognets & Co., Lexington, to construct concrete storm sewer 340 ft. long, 5 ft. in diam.; J. E. Cassidy, Mayor. (Call for bids lately noted.)

La., Baton Rouge.—City will construct 36,000 lin. ft. vitrified pipe sewers from 6 to 12 in. diam., including cast-iron pipes, flush tanks, manholes and other appurtenances; bids until Aug. 1; John J. Mundinger, City Engr. (See Machinery Wanted.)

La., Donaldsonville.—City is corresponding with company relative to construction of sewer system. Address The Mayor.

Miss., Starkville.—City is having surveys made to install sewer system; John R. Baylis, Engr., 704 Farley Bldg., Birmingham, Ala.

N. C., Charlotte.—City let contract A. G. Gulon to renovate west septic tank; cost \$3000.

N. C., Durham.—City will issue \$60,000 bonds for work on Third Fork Creek, extension of sewers and repairing beds at old disposal plant on Elerbee Creek; cost \$35,000 to \$40,000; Gilbert C. White, Engr., Charlotte, N. C.

N. C., Hertford.—City engaged J. B. McCrary Co., Atlanta, Ga., as engineer in charge of constructing sewer system; \$13,000 bonds lately noted voted.

N. C., Kinston.—City voted \$100,000 bonds to extend sewers, etc.; lately noted; F. I. Sutton, Mayor. (See Road and Street Work.)

N. C., Morehead City.—City is reported to construct sewer system. Address The Mayor.

N. C., Morehead City.—City engaged J. B. McCrary Co., Atlanta, Ga., as supervising engineer to prepare plans and estimates for sanitary sewer system; cost about \$30,000.

N. C., Winston-Salem.—City voted \$50,000 bonds for sewage-disposal plant; engaged J. L. Ludlow, Engr., Winston-Salem, to make preliminary survey; O. B. Eaton, Mayor. (Lately noted.)

Tex., Ennis.—City voted \$30,000 bonds to construct sewer system; W. D. Farris, Mayor. (Lately noted.)

Tex., Houston.—City let contract Hunter & Hunter at \$7000 to construct sanitary sewers in Hyde Park Addition; E. E. Sands, City Engr. (Call for bids lately noted.)

Tex., Houston.—City Council approved plans prepared by E. E. Sands, City Engr., for sewage pumping plant at Westmoreland Station.

W. Va., Huntington.—City Commrs. ordered advertisement for bids to construct Fourth Ward sewer; A. B. Maupin, City Engr., has about completed plans and specifications.

Va., Rocky Mount.—City is considering construction of sewer system. Address The Mayor.

TELEPHONE SYSTEMS

Fla., St. Petersburg.—West Coast Telephone Co., Howard Frazee, Mgr., will install switchboard; capacity to handle 6000 telephones; has let contract.

Fla., Tampa.—Peninsular Telephone Co., W. G. Brorein, Prest. and Gen. Mgr., plans to construct general office and exchange building; install new exchange equipment and make additions to cable plant; also plans to install about 200 mi. additional copper toll lines, connecting various exchanges with Tampa. (Lately noted as contemplating \$300,000 expenditure.)

Okla., Ringling.—Pioneer Telephone Co., W. H. Berry, Sr., Mgr. Ardmore, Okla., let contract to erect brick exchange on W. Main St.

Tex., Dallas.—Southwestern Telegraph & Telephone Co. is reported to build exchanges at Oak Lawn and Oak Cliff, each to cost \$30,000.

Tex., Hemphill.—Sabine Citizens' Telephone Co., capital stock \$5000, organized by Butler & Minton and others; will construct telephone system.

TEXTILE MILLS

Ga., Grantville.—Hosiery.—Grantville Hosiery Mills will increase from 5000 to 10,000 spindles; erect 220x100-ft. building addition of brick, with tar-concrete floor and tar-gravel roof; remodel and enlarge powerhouse, install new engine with condensing equipment, heater, pumps, etc., and add low-pressure side to engine; Engr.-Archit., Park A. Dallas Co., 913 Candler Bldg., Atlanta.

N. C., Burlington.—Cotton Cloth.—E. M. Holt Plaid Mills will add 24 36-in. looms; has let contract.

N. C., Randleman.—Cotton Cloth.—Deep River Mills reported to rebuild on enlarged scale weaving department reported burned at loss of \$15,000 to \$18,000.

S. C., Batesville.—Cotton Yarn.—Prospect Mills, capital \$25,000, inceptd. as successor to Batesville Mill; will spin cotton yarns; MacMillan B. King, Prest.; E. J. D. Camps, Treas. (Lately noted inceptd. under Flour, Feed and Meal Mills.)

WATER-POWER DEVELOPMENTS

Ga., Eatonton.—City rescinded recent bond election for water and light bonds; M. S. Shivers, Chrmn. Special Com. Light and Water Boards. (Lately noted.)

N. C., Hot Springs.—Industrial Power Co., Archibald Nichols, Prest., Asheville, N. C., plans to develop one or more water-power properties (now owned or to be acquired) on French Broad River; first development probably near Hot Springs, about 2000 H. P.; require 4 or 5 units of 400 to 500 H. P. each; may install vertical water wheels, operating under 12-ft. head, direct connected to umbrella-type generators; install 1000 H. P. at first; plans not completed; contemplates 5-ft. concrete or masonry dam, 450 ft. long, on rock foundation; concrete and brick powerhouse; about 3 mi. transmission; power for local manufacturing; opens construction bids about Aug. 15; probably acquire additional undeveloped power, to yield about 15,000 H. P., cost of development approximating \$1,000,000. (Lately noted organized, capital \$100,000.)

Tex., Marble Falls.—City, R. E. Johnson, Mayor, contemplates establishment of water-power, water-works and electric-light system previously noted in 1913; proposes to derive power from Colorado River; contemplated improvements also include steel or reinforced concrete bridge and incinerator plant; bond issue proposed. (See Machinery Wanted.)

WATER-WORKS

Ala., Cullman.—City voted on \$30,000 water and light bonds; will change water-works from well supply to creek supply; construct concrete dam, pumping station, filter plant and 100,000-gal. tank and tower; John R. Baylis, Engr., 704 Farley Bldg., Birmingham, Ala.

Ala., Jackson.—City plans to issue bonds to construct water-works and electric-light plant to cost \$12,000 to \$15,000; C. W. Boyles, Mayor; lately noted. (See Machinery Wanted.)

Ala., Tuscaloosa.—City engaged Morris Knowles, Oliver Bldg., Pittsburgh, Pa., as engineer in charge of extending water-works; S. H. Spratt, Prest. Board of City Commrs. (City Council lately noted as authorizing \$100,000 bonds to improve water-works.)

Ark., Benton.—City, R. C. Bailey, Mayor, will construct lately-noted water-works and sewer system; cost about \$60,000; open bids about Nov. 1; Engr., E. A. Kingsley & Co., Little Rock, Ark.

Ark., Heber Springs.—City contemplates voting on bonds to build water-works system. Address The Mayor.

Fla., Dade City.—City voted \$30,000 bonds to construct water-works. Address The Mayor. (Lately noted.)

Fla., Daytona Beach.—City, Harry A. Horn, Clerk, asks bids until July 11 to construct lately-noted water-works; includes engines, pumps, 50,000-gal. steel tank on 85-ft. tower, 1800 ft. 8-in., 500 ft. 10-in., 8910 ft. 6-in., 3885 ft. 4-in. cast-iron class B pipe; 7075 ft. 2-in. and 2000 ft. 1½-in. galvanized pipe with fittings, special castings, hydrants, valves and boxes, etc.; J. B. McCrary Co., Engr., 1408 Third National Bank Bldg., Atlanta, Ga. (See Machinery Wanted.)

Fla., Largo.—City will construct water-works and sewer systems and pave about 1 mi. of streets; will vote on \$40,000 bonds; expend total of \$55,000; J. B. McCrary Co., Atlanta, Ga., to prepare estimates and supervise construction.

Fla., Seabreeze.—City is considering bond issue to secure water supply. Address The Mayor.

Fla., Perry.—City will construct water-works and sewer system; plans prepared; C. L. Brandon, City Clerk.

Ga., Canton.—City voted \$5000 bonds to improve water-works and electric-light plant; Howell Brooke, Mayor.

Ga., Comer.—City contemplates voting on bonds for water-works construction. Address The Mayor.

Ga., Eatonton.—City rescinded recent bond election for water and light bonds; M. S. Shivers, Chrmn. Special Com. Light and Water Boards. (Lately noted.)

Ga., Quitman.—City votes in August on \$75,000 to \$125,000 bonds, \$40,000 to be for additions to water-works and electric-light plant; balance for additional sidewalk paving and white way. Address The Mayor. (Lately reported considering vote on \$75,000 bonds for water-works and other purposes.)

Ga., Swainsboro.—City, C. H. Thompson, Mayor, contemplates bonds to install water-works; bid to amend city charter now pending in State Legislature.

Ky., Burkesville.—Geo. H. Greenup will establish water-works and electric-light plant.

Md., Baltimore.—Mountain Valley Spring Water Co. will not build water-works; will bottle and market radioactive water of Mountain Valley Springs in Arkansas. (Lately noted inceptd. by Robt. G. Hogan, 233 Calvert Bldg., and others.)

Md., Baltimore.—City let contract Consolidated Engineering Co., 243 Calvert Bldg., at \$201,589 to erect concrete buildings (superstructures) at filtration plant at Lake Montebello. (Lately noted.)

Md., Greensboro.—City will construct water-works; cost \$20,000; erect 17x30-ft. brick building, asbestos-shingle roof; install 2 triplex pumps; 2 oil or gas engines; 50,000-gal. tank and 107-ft. tower; bids received until July 9; Hugh T. Downing, Engr., Dover, Del.; Temple Smith, Secy. (See Machinery Wanted.)

Miss., Batesville.—City, V. H. Ward, Mayor (previously noted to construct water-works, capacity 150,000 gal., cost \$18,000), asks bids until July 7 on kerosene engine, oil tank, triplex power pump, two deep-well power heads, etc.; Engr., Dabney Engineering Co., Porter Bldg., Memphis, Tenn. (See Machinery Wanted.)

Mo., Cassville.—City contemplates voting on \$6000 bonds to improve water-works. Address The Mayor.

Mo., Charleston.—City will construct water-works; bids until July 2; Frank L. Wilcox, Engr., Syndicate Trust Bldg., St. Louis.

Mo., Kahoka.—City voted \$11,000 bonds for water-works and electric-light-plant extension; H. W. Trump, City Clerk.

Mo., Springfield.—Springfield Water-works Co. will drill 2 wells and make other improvements to water-works.

N. C., Hertford.—City engaged J. B. McCrary Co., Atlanta, Ga., as engineer in charge of constructing water-works; \$17,000 bonds lately noted voted.

N. C., Winston-Salem.—City voted \$50,000 bonds to improve water station and extend mains; O. B. Eaton, Mayor. (Lately noted.)

Okla., Cushing.—City votes July 7 on \$25,000 bonds for water system. Address The Mayor.

Okla., Lehigh.—City plans extension of water system; bonds amounting to \$40,000 voted on June 30. Address The Mayor.

Okla., Talihina.—City contemplates voting on bonds to install water-works. Address The Mayor.

Tenn., Columbia.—City engaged Solomon-Norcross Co., Candler Bldg., Atlanta, Ga., to prepare estimates for erection and equipment of water plant.

Tex., Beaumont.—City let following contracts: Lake Arthur Dredging Co., Beaumont, at \$15,000, to dredge canal for intake water-works; Brash & Gray, Joplin, Mo., at \$24,200, to build settling basin; American Cast Iron Pipe & Foundry Co., Birmingham, Ala., at about \$5000, to lay water mains; Burns & McDonnell, Consult. Engrs., 821 Scarritt Bldg., Kansas City, Mo. (Call for bids lately noted.)

Tex., Ennis.—City voted \$35,000 bonds to improve water-works; W. D. Farris, Mayor. (Lately noted.)

Tex., Galveston.—City let contract Layne & Bowler of Houston at \$13,080 to drill 2 wells at Alta Loma pumping station.

Tex., Kilcullen.—City asks bids until July 13 on materials for previously-noted water-works construction; 1500 ft. 8-in., 550 ft. 6-in. and 800 ft. 4-in. cast-iron pipe, gate valves, hydrants and motor-driven deep-well pump; Engrs., M. Griffin O'Neil & Sons, 1515 Praetorian Bldg., Dallas, Tex. (See Machinery Wanted.)

Tex., Marble Falls.—City, R. E. Johnson, Mayor, contemplates water-works construction. (See Water-power Developments and Machinery Wanted.)

Tex., Milford.—City will expend \$10,000 of lately-noted bond issue (\$14,000) on water-works construction and \$4000 on street improvements; J. M. Goldston in charge.

Tex., Pilot Point.—City contemplates constructing water-works; cost \$14,000; J. G. Shelton, City Secy.

Tex., San Antonio.—San Antonio Water Supply Co. will install two 5,000,000-gal. pumps and steam turbines, condensers and accessories; three 250 H. P. boilers and accessories; Robt. J. Harding, Ch. Engr.; bids until Aug. 3; lately noted as having plans and specifications for pumping station, daily capacity 750,000,000 gals. (See Machinery Wanted.)

Tex., Waco.—Water Comms. let contract C. G. Hamill to drill artesian well at 1st and Webster Sts.; contract price, \$9000 for first 2000 ft.; balance of drilling to be paid for by feet.

Va., Rocky Mount.—City is considering construction of water-works. Address The Mayor.

W. Va., Wheeling.—City votes July 9 to decide character of filtration plant to be installed; 20,000,000 gals. capacity; low-lift pumping station and filter buildings; install rapid sand filtration wells or Smith slow sand system; expenditure \$400,000; Johnson & Fuller, Engrs., 150 Nassau St., New York.

WOODWORKING PLANTS

Fla., Clearwater.—Novelty Works, etc.—J. J. Mendenhall and John S. Wyatt contemplate rebuilding novelty works, crate mill and planing mill reported burned at loss of \$60,000.

Fla., Pensacola.—Sash, Doors, etc.—Builders' Mfg. Co., G. W. Owen, Prest.-Mgr. (lately noted organized), is constructing, under own supervision, a 2-story 45x70-ft. \$1000 building with frame composition roof; machinery mainly purchased; cost about \$4000. (See Machinery Wanted.)

Ga., Valdosta.—Mantels, etc.—Yellow Pine Variety Co. (lately noted) will elect officers upon receipt of charter; probably J. C. Dasher, Prest. and Gen. Mgr.; J. R. Dasher,

V.-P., and M. J. Chauncey, Secy.-Treas.; has machinery; will erect large warehouse and 2 or 3 storage sheds of corrugated iron; building materials probably locally purchased; need metal screen slides. (See Machinery Wanted.)

Ky., Roxana.—Staves.—McGlone Bros., Morehead, Ky., will locate portable stove mills near Roxana; manufacture tight barrel staves.

La., Natchitoches.—Shingles.—Manchac Lumber Co., Plaquemine, La., will build shingle and saw mills; Frank Glenn to supervise construction and be in charge of mill.

Tenn., Morristown.—Furniture Tops and Panels.—Hardwood Top & Panel Co., capital \$25,000, incptd.; J. N. Fisher, Prest.; W. A. Dougherty, V.-P.; W. C. Hale, Secy.; H. S. Taylor, Mgr.; will lease building and install machinery to mfr. solid and veneer table tops, etc.; daily capacity 3000 to 5000 ft. (See Machinery Wanted.)

FIRE DAMAGE

Ala., Birmingham.—Dr. J. E. Seay's residence at 2250 Sycamore Ave.; loss \$10,000.

Ala., Boyles, Station at Birmingham.—Louisville & Nashville R. R.'s storehouse at Boyles shops; W. H. Courtenay, Ch. Engr., Louisville, Ky.; loss \$5000 to \$10,000.

Ala., Carrollton.—W. P. Ferguson's planing mill.

Ala., Gurley.—Alabama Red Cedar Co.'s pencil plant, loss \$12,000; Gurley Electric Light Co.'s plant, loss \$4000.

Ala., Northport.—G. P. Hammer's store; Rice Bros.' store; T. H. Powell's building; N. G. Holly's store; Northport Furniture Co.'s building; Koster & Son's building; total loss \$60,000.

Ala., Tuscaloosa.—Cunningham & Floyd Lumber Co.'s plant; loss \$15,000 to \$20,000.

Ark., Fort Smith.—Fort Smith Casket Co.'s plant; loss \$10,000.

Ark., Harrison.—Building owned by Joel Bunch and C. D. Allison, loss \$8000; building owned by C. M. Greene and R. T. Knight, loss \$2500; Minicus & Iman's bakery, loss \$4000.

Fla., Bronson.—J. L. Medlin & Co.'s naval stores plant.

Fla., Clearwater.—Planing mill, novelty works, crate mill and lumber yard, owned by J. J. Mendenhall and John S. Wyatt, loss \$60,000; Crutchfield & Woolfolk's orange packing-house, loss \$12,000.

Ga., College Park.—E. D. Barrett's residence; loss \$5000.

Ga., Girard.—Gibson Bldg.; 2 dwellings occupied by Mr. Moon and Mr. McKane; Jos. Thompson Co.'s storehouse; loss \$40,000 to \$50,000.

Ga., Thomasville.—Georgia Crate & Basket Co.'s plant; loss \$10,000.

Ky., Flemingsburg.—Shirley Collins' residence; loss \$4000.

Ky., Hazard.—Dr. A. M. Gross' residence; loss \$3000.

Ky., Henderson.—A. Waller Elevator Co.'s warehouse; loss \$7000.

Ky., Hopkinsville.—Dalton Bros.' drying sheds and 2 kilns.

Ky., Louisville.—American Oak Leather Co.'s hide house, water tanks, storage shed and stables at 12th and Lexington Sts.; estimated loss \$10,000.

Ky., Mt. Sterling.—Hotel conducted by Wm. Day and owned by Dan Young; loss \$6000.

Ky., Midway.—Two cottages on Rena Ave. owned by N. B. Risk estate.

Md., Avery, P. O. at Rockville.—John L. Welsh's store; loss \$5000.

Md., Baltimore.—Baltimore Mfg. Co.'s Warehouse No. 1 at Buren and Monument Sts.; loss on building \$10,000.

Md., Hagerstown.—Windsor Knitting Mills; estimated loss \$100,000.

Miss., Maben.—New Orleans, Mobile & Chicago R. R.'s depot, loss \$3500; B. V. Wright, Ch. Engr., Laurel, Miss.

Mo., Bucklin.—Harland Undertaking Establishment, building occupied by Butteroff Dry Goods Co.; Lever Real Estate Co.'s office and other buildings; loss \$15,000.

Mo., Clinton.—Clinton First Presbyterian Church; Dr. J. F. Fetterolf, pastor.

Miss., Shuqualak.—Usher Bros.' sawmill; estimated loss \$25,000.

Mo., Corning.—A. O. Dankers' warehouse; loss \$8000.

Mo., Flat River.—Building owned by M. Harris, Desloge, Mo.; loss \$20,000.

Mo., St. Louis.—Plants of Luyties Pharmaceutical Co., Luyties Chemical Co., Manola Co. and Walker Co. at 4200 Laclède

Ave., all controlled by F. August Luyties; loss on building \$50,000, and on stock about \$100,000.

Mo., Union Star.—N. P. Fallis' store; building occupied in part by Benj. Hardin Dry Goods Co.; loss \$10,000.

N. C., Angler.—Buildings occupied by J. C. and B. F. Williams, McTee & Wilson, W. A. Deal and R. D. Overby & Bros.; loss \$50,000.

N. C., Fairfield.—Richard Jennings' residence at Fairfield Lake; loss \$12,000 to \$15,000.

N. C., Greensboro.—Gullford Hotel; loss on building \$4000.

N. C., Misenheimer.—Ebenezer Mitchell Home, W. J. Plint, Mgr.; loss \$25,000.

N. C., Newton.—Mrs. Alice Rowe's residence.

N. C., Randleman.—Deep River Mills' weaving department; loss \$15,000 to \$18,000.

N. C., Statesville.—Walter Carter's saw-mill.

N. C., Star.—Norfolk Southern R. R.'s depot and freight warehouse; F. L. Nicholson, Ch. Engr., Norfolk, Va.

S. C., Columbia.—Washington Clark's residence at 1714 College St.

Tenn., Alexandria.—Buildings of Alexandria Fair; loss \$8000 to \$10,000.

Tenn., Knoxville.—Chas. Hunter & Co.'s building; loss \$20,000.

Tenn., Memphis.—Louis Laskovitz's dwelling; loss \$3000.

Tex., Bullard.—B. J. Stripling's building.

Tex., Bartlett.—Koepke-Brown Co.'s store.

Tex., Dallas.—Luther Andrew's residence; loss \$4000.

Tex., Fort Worth.—Parker-Browne Mfg. Co.'s extract factory at Pacific and Oak Sts.; estimated loss \$30,000.

Tex., Houston.—Martin Martinez's building in Magnolia Park.

Tex., San Marcos.—City Hall, loss \$8000 (address The Mayor); Johnson & Johnson's buildings, loss several thousand dollars.

W. Va., Marshes.—J. H. Poteet's saw and planing mill.

Va., Richmond.—Mayo Barrel Mfg. Co.'s plant, Crystal Bottling Works; loss about \$15,000.

BUILDING NEWS

BUILDINGS PROPOSED

APARTMENT-HOUSES

Ge., Atlanta.—N. P. Cooledge will erect 2-story brick veneer apartment-house at 113-23 Bedford Pl.; cost \$5000; day labor.

Ky., Lexington.—Mark Stevens, 310 S. Broadway Park, will expend \$15,000 to erect apartment and store building; 60x60 ft.; 2 stories; brick. (Lately noted.)

La., New Orleans.—J. M. Marrie will erect duplex apartment-house at 3314 Carondelet St.; 2 stories; cost \$7000.

Mo., Kansas City.—C. E. Phillips, 724 Dwight Bldg., has plans by N. E. Peters, 29th and Campbell Sts., Kansas City, for apartment-house; 2 buildings; 39x60 ft.; cost (without mechanical equipment) \$17,000 each; ordinary construction; steam heat to cost \$1200; gas and electric lighting; construction by owner. (Lately noted.)

Mo., Kansas City.—L. B. White will erect apartment-house at 4437-39 Troost Ave.; brick and stone; 3 stories; 6 suites; cost \$20,000.

Mo., St. Louis.—Eugene J. Epstein is reported to erect apartment-house on Waterman Ave. between Lake Ave. and Kings-highway; 3 suites; contract let.

Mo., St. Louis.—Frank Peters will erect 2-story tenement at 2012-14 Warne St.; cost \$5500.

Mo., St. Louis.—F. J. Cornwell & Son will erect 3-story tenement at 5721 Westminster St.; cost \$7000.

Mo., St. Louis.—H. F. Tacke will erect three 2-story tenements at 3464-72-74 Gilles St.; cost \$17,000.

Mo., St. Louis.—Herman Alles will erect 2-story tenement-house at 2311-13 Fair St.; cost \$4800.

Mo., St. Louis.—J. Grewe Construction Co. will erect three 2-story tenements at 2912-14 and 2918 Herbert St.; cost \$13,500.

Mo., St. Louis.—Leo K. Milberger will erect 2-story tenement-house at 3421-21a Iowa St.; cost \$4500.

Mo., St. Louis.—M. H. Fink will erect 2-story tenement-house at 4362-64 Penrose St.; cost \$5000.

Mo., St. Louis.—W. Degenhardt will erect two 2-story tenements at 5300-06 S. Compton St.; cost \$9000.

Mo., St. Louis.—Henry Behrbach has plans by Henry Schaumburg, Jr., St. Louis, for apartment-house on Arsenal St. near Grand Ave.; 5 and 6-room suites; construction under supervision of Haase Realty Co., St. Louis.

Mo., St. Louis.—F. Hoffmeyer will erect addition to tenement-house at 4301 Gano Addition; cost \$7500; construction by owner.

Mo., St. Louis.—A. L. Woas, 3910 Coun St., will expend \$5300 to erect 2-family apartment-house; 32x48 ft.; ordinary construction; composition roof; steam heat to cost \$350; plans and construction by owner. (Lately noted.)

Mo., St. Louis.—Fredk. W. Sherer will erect 2-family apartment-house; cost \$7500.

Mo., St. Louis.—Ribara Realty & Building Co. is erecting apartment-house at 5722 Westminster Pl.; cost \$13,500; ordinary construction; tile and gravel roof; low-pressure steam heat; contracts sublet; A. Blair Rid-

dington, Archt., 1219 Fullerton Bldg., St. Louis. (Lately noted.)

S. C., Charleston.—J. D. S. Claussen will erect 2 apartment buildings at 24 Sumter St.; cost \$7000.

Tenn., Memphis.—W. M. Robertson will erect frame tenements at 210-14 Morgan Pl.; cost \$3000.

Tex., El Paso.—C. D. Pollock will erect brick apartment-house; cost \$21,000.

Tex., Fort Worth.—W. R. Sawyer is having plans prepared by L. B. Weinman, Fort Worth, for apartment-house. (Lately noted to cost \$3000.)

ASSOCIATION AND FRATERNAL

Md., Baltimore.—Independent Order of Frith Shalom will erect building at 1012-14 E. Baltimore St., according to plans by Geo. R. Cahill, Jr., Knickerbocker Bldg., Baltimore; 40x150 ft.; ornamental brick; limestone trimmings; limestone entrance arch and bronze doors; foyer outlined with marble pilasters and paneled walls; marble stairways; tin or slag roof; steam heat; electric lighting; cost \$25,000; contractors estimating are Consolidated Engineering Co., Gunther Bldg.; Singer-Pentz Co., Equitable Bldg., both of Baltimore; Ideal Construction Co.; bids opened June 30. (Lately noted.)

N. C., Scotland Neck.—A. F. and A. M. are reported to erect temple; cost \$20,000 to \$25,000.

Okla., Tulsa.—Y. M. C. A. receives bids until July 22 at 422 Clinton Bldg. to erect 4-story and basement fireproof building; 90x130 ft.; drawings and specifications obtainable from Shattuck & Hussey, Architects, 19 S. LaSalle St., Chicago, or office of Y. M. C. A. (Previously noted to cost \$100,000.)

S. C., Columbia.—Y. W. C. A. will be incorporated by Mrs. Annie E. Guerry, Miss Minnie Trenholm, Miss Mabel Peete and Mrs. Lucile B. Gonzales; will erect building.

Tex., Austin.—B. P. O. E. has plans by C. H. Page & Bro., Austin, for building; 3 stories and basement; lower floor for stores; upper floors, lodge purposes; heating plant, bowling alley, etc., in basement. (Lately noted.)

Tex., Brownsville.—A. F. & A. M. are reported to expend \$4000 to remodel building for temple.

Tex., Corsicana.—B. P. O. E., Lodge No. 172, is having plans prepared by Field & Clarkson, Fort Worth, for clubhouse; 52x74 ft.; cost (without mechanical equipment) \$30,000; ordinary construction; composition roof; steam heat to cost \$1800; bids opened July 6; address proposals to architect. (Lately noted.)

Tex., Honey Grove.—Woodmen of the World will erect 2-story building, 40x50 ft., and 1-story building, 20x80 ft.; cost \$10,000.

Tex., Lockhart.—Lockhart Lodge No. 690, A. F. & A. M., will not erect building for several years. (Lately reported to erect 2-story building.)

Tex., McKinney.—Woodmen of the World are receiving bids to erect building; 2 stories and basement; brick; 50x80 ft.; lower floor for mercantile purposes; upper floor for lodge rooms.

Va., Richmond.—Col. F. P. McConnell, care of Manchester National Bank, and others have plans for building for lodgerooms, bank, offices and store. (See Bank and Office Buildings.)

BANK AND OFFICE

Ala., Birmingham.—North Birmingham Savings Bank has plans by R. E. Posey, Brown-Marx Bldg., Birmingham, for addition to bank building.

Ala., Eufaula.—Bank of Eufaula is reported improving bank building.

Ala., Winfield.—D. O. Whildin, Birmingham, Ala., is preparing plans for 1-story bank building.

D. C., Washington.—Clarke Waggaman, 1124 Connecticut Ave. N. W., prepared plans for store, office and hall building. (See Stores.)

Fla., Fort Meade.—First National Bank will erect brick building.

Ga., Chatsworth.—C. N. King, Prest. Co-butta Banking Co., will erect 2-story building; banking quarters on first floor, offices on second; fixtures to be installed in bank; electric lights; plumbing.

Ga., Macon.—Fourth National Bank of Macon, J. F. Heard, Prest., will remodel interior of building and install bank fixtures.

Ga., Thomaston.—R. E. Chatfield will erect office and store building; 2 stories; brick; tile floors; tar and gravel roof; plans by Park A. Dallis Co., 913 Candler Bldg., Atlanta. (Lately noted.)

Ky., Maysville.—John O'Keefe will erect store and office building. (See Stores.)

Md., Arlington.—Commercial Bank of Maryland has plans by Owens & Sisco, Continental Bldg., for bank building in West Arlington, and will receive bids until July 6; 2 stories; 50x60 ft.; brick; contractors estimating are C. C. Watts, 113 W. Hamilton St.; Phillip Watts & Son; E. G. Turner, Bateman Ave.; W. T. Childs, 14-16 W. 20th St.; Howard Park Constr. Co.; Consolidated Engineering Co., Gunther Bldg.; John Hiltz & Sons, 7 Clay St.; Cowan Bldg. Co., 106 W. Madison St.; G. Walter Tovell, Eutaw and Dolphin Sts.; W. E. Burnham, Law Bldg.; A. F. West, 15 E. Fayette St.; Gladfelter & Chambers, 274 Woodberry Ave., all of Baltimore. (Lately noted.)

Md., Mt. Airy.—First National Bank of Mt. Airy, Milton G. Urner, Prest., Frederick, Md., will erect building to replace burned structure; 30 ft. 8 in. by 44 ft. 3 in.; red brick; hollow tile interior finish; 4 heavy brick pilasters supporting porch above entrance; terra-cotta base and trimmings. (Previously noted.)

Miss., Waynesboro.—Fagan-Peel Co., is reported to erect addition to building to be occupied by News-Beacon office, Clanton Restaurant, moving-picture theater, etc.

Okla., Tulsa.—A. F. Ault has plans by Geo. Winkler, Tulsa, for office, store and hotel building; 3 stories; 40x134 ft.; cost (without mechanical equipment) \$25,000; ordinary construction; composition gravel roof; bids opened July 4; address proposals to architect. (Lately noted.)

S. C., Elloroe.—Bank of Elloroe will erect building; cost \$4000; Jas. B. Urquhart, Archt., Columbia, S. C.; contract let July 3.

S. C., Ridgeway.—Bank of Ridgeway, N. W. Palmer, Cash., opens bids July 15 to erect bank building; 2 stories; 28x70 ft.; brick and terra-cotta; tin roof; heating not determined; cost \$9000; Jas. B. Urquhart, Archt., Columbia, S. C. (Lately noted.)

Tenn., Columbia.—W. B. Greenlaw has plans for moving-picture theater, store and office building. (See Stores.)

Tenn., Knoxville.—J. E. Carty will erect store and office building. (See Stores.)

Tenn., Trenton.—First National Bank is reported to expend \$3500 to improve building.

Tex., El Paso.—Fenchler Bros. will not consider erecting building until expiration of lease on present structure in two years. (Previously noted to erect building to cost \$200,000.)

Tex., Fort Worth.—Fort Worth Club opens bids middle of July through Muller & Poland, Archts., 717 Fort Worth National Bank, Fort Worth, to erect office and club building; 10 stories; cost (without mechanical equipment) \$200,000; fireproof; promenade tile roof; cement sidewalks and lights; 1 freight, 2 passenger elevators and dumb-waiter. (Previously noted.)

Va., Richmond.—Col. F. P. McConnell, care of Manchester National Bank, and others have plans by Harvey L. Williams, care of South Richmond Bank, Richmond, for building at Hull and 11th Sts., for bank and offices, store and lodgerooms; 3 stories;

45x155 ft.; ordinary fireproof or slow-burning construction; metal, slate or composition roofing; bids opened. (Lately noted.)

W. Va., Huntington.—Cyrus D. McLane, Archt., Rock Island, Ill., states plans to erect building for John S. Farr are indefinitely postponed. (Contract previously noted let to Central Engineering Co., Davenport, Iowa.)

CHURCHES

Ala., Birmingham.—Avondale Baptist Church will erect building; cost \$20,000. Address The Pastor.

Ala., Eufaula.—First M. E. Church is reported to erect \$25,000 building. Address The Pastor.

Ala., Tuscaloosa.—Christian Church, Rev. L. F. Sanford, pastor, will erect building; concrete and pebble dsh; 36x50 ft.; O. V. Crabtree and others, Bldg. Com.

Ark., Little Rock.—Capitol View Methodist Church is reported to expend \$15,000 for improvements to building at 311 Pulaski St.; will erect additional story, etc.; R. P. Morris, Archt., Little Rock.

Ark., Shirley.—Methodist Church will erect building. Address The Pastor.

D. C., Washington.—St. Albans Episcopal Church, Wisconsin and Massachusetts Ave. N. W., will expend \$7500 to repair building at Mt. St. Alban. Address The Rector.

Fla., Orlando.—Presbyterian church, Rev. John W. Stagg, pastor, is reported to expend \$10,000 to \$12,000 to remodel building; will extend 20 ft. in rear, remodel spire, erect choir loft; stained glass memorial windows.

Ga., Manchester.—Christian Church will erect tabernacle; 30x50 ft.; erect permanent structure later. Address The Pastor.

Ga., Ocilla.—First Baptist Church, R. V. Paulk, Chrmn. Building Com., opens bids July 15 to erect building; 9x290 ft.; ordinary construction; cost \$17,000; J. E. Green, Archt. (Lately noted.)

Md., Baltimore.—Bethany M. P. Church, Rev. C. E. McCullough, Pastor, Lafayette Ave. and Washington St., will soon erect proposed building to replace present structure; Port Deposit granite.

N. C., Lexington.—Wheeler & Stern, Charlotte, N. C., are preparing plans for Sunday-school addition; 17 rooms; ordinary construction; brick; slate roof; hot-air heat; electric lighting; cost \$6000; bids opened about July 1

S. C., Aiken.—Aiken Baptist Church will erect building; cost \$20,000. Address The Pastor.

S. C., Elloroe.—Methodist church plans erection of building on Main St. to replace present structure. Address The Pastor.

Tenn., Chattanooga.—First Universalist Church, Rev. L. R. Robinson, pastor, will erect Shinn Memorial Church at Main and Hickory Sts.; cost about \$25,000.

Tex., Austin.—First Baptist Church, Rev. W. A. Hamlett, pastor, opens bids about Oct. 1 to erect building; 130x110 ft.; 3 stories; terra-cotta; fireproof construction; probably tile roof; cost \$50,000; C. W. Bulger, Archt., Dallas. (Previously noted.)

Tex., Galveston.—First Church of Christ, Scientist, will probably erect building on 27th St. and Avenue P.

Va., Emporia.—Episcopal Church will expend \$10,000 to erect building; 38x85 ft.; slate roof; steam heat; A. F. Hunt, Archt., 1107 E. Main St., Richmond; bids opened July 3. Address proposals to E. E. Goodwyn, Emporia. (Lately noted.)

Va., Roanoke.—Christ Protestant Episcopal Church, Rev. G. Otis Mead, rector, is having plans prepared by Fredk. M. Mann, Minneapolis, Minn., for church and parish-house at Franklin Rd. and 11th Ave.; cost of former \$25,000, latter \$10,000. (Previously noted.)

CITY AND COUNTY

Fla., Apopka.—City Hall.—City votes July 18 on \$13,000 bonds, to include \$4000 to erect city hall. Address The Mayor.

Fla., Quincy.—Fire Station.—City will call for bids to erect fire station; 2 stories; brick; 44x54 ft.; cost about \$4000; completion Oct. 15; plans by and construction under supervision of L. W. Cooper, Quincy.

Fla., St. Petersburg.—Library.—Library and Municipal Advertising Com. receives bids until July 6 to erect Carnegie library; plans and specifications at office of Com.; W. L. Straub, Prest. (Previously noted.)

La., New Orleans.—Warehouses.—Board of Port Comms. receives bids until July 30 for dredging and filling in Mississippi River preparatory to beginning construction of warehouses and terminal facilities. (See Warehouses.)

Okla., Tulsa.—Market.—City has tentative plans by J. I. Harris, Inspector of Buildings, for proposed market to cost approximately \$10,000; "L"-shape; reinforced concrete; center paved with concrete; sheds for hay, etc.; municipal scales; O. D. Hunt, Acting Mayor.

Tenn., Etna.—City Hall.—City voted \$17,500 bonds to erect city hall. Address The Mayor.

Tex., Dallas.—Comfort Station.—Park Board will erect 2 public comfort stations at Elm, Ervay and Live Oak Sts.

Tex., Dallas.—Zoo.—City has plans by Lang & Witchell, Wilson Bldg., Dallas, for building at Forest Park Zoo; cost \$3425.

Va., Alexandria.—Hospital.—City is reported to erect \$50,000 hospital; Worth Hufish, Chrmn. Trustees.

Va., Petersburg.—Municipal Building, etc.—City Council on July 7 will consider \$300,000 bond issue to erect municipal building, armory and schools; Robt. Cabanis, Mayor. (Lately reported.)

COURTHOUSES

Ark., Bentonville.—Benton county, H. C. Smith, Judge, is having plans prepared for courthouse; cost about \$175,000.

Fla., Miami.—Dade County Comms., Z. T. Merritt, Clerk, receive bids until July 7 for furnishing plans and specifications and supervising construction of addition to courthouse; information on application. (Lately noted.)

N. C., Whiteville.—Columbus County Commissioners are having plans prepared by J. E. Leitner, Wilmington, N. C., for courthouse; cost \$50,000. (Lately noted.)

Tenn., Winchester.—Franklin County Commissioners are having plans prepared by C. K. Colley, Chamber of Commerce Bldg., Nashville, for courthouse; bids received until July 4; plans and specifications at office of county judge at Winchester and architect as above. (Lately noted.)

DWELLINGS

Ala., Anniston.—Anniston Yarn Mills will not erect houses as lately reported.

Ala., Birmingham.—Mrs. E. P. Ewert will erect 2-story frame dwelling; cost \$3000.

Ala., Florala.—T. A. Goodwin will erect residence at 5th St. and 8th Ave.

Ala., Troy.—Claude Wright will erect six-room bungalow.

Ark., Little Rock.—John Thilar will erect 2-story residence at 1110 High St.; cost \$1500.

D. C., Washington.—C. Heinrich, 1307 New Hampshire Ave., will expend \$7619 to repair dwelling at 1301 New Hampshire Ave.

D. C., Washington.—A. C. Moses Co., The Burlington, will erect 5 dwellings on 18th St. between Kilbourne and Kenyon Sts. N. W.; also 15 dwellings, each with 6 rooms and bath, on Randolph St. between 4th and 5th Sts. N. E.

D. C., Washington.—H. R. Howenstein, 1314 F St. N. W., has plans by W. R. Talbot, 1314 F St. N. W., Washington, for 4 dwellings at 2515-21 N. Capitol St.; cost \$12,000; construction by owner.

D. C., Washington.—W. Preston, 719 S St. N. W., has plans by Hunter & Bell, 1421 H St. N. W., Washington, for 3 dwellings at 3012-16 Park Pl. N. W.; cost \$7500; construction by owner.

Fla., Buena Vista.—C. F. Reynolds will erect residence in Badger Park.

Fla., Clearwater.—Chas. Oesterle will erect dwelling at Osceola and Cleveland Sts.; 1½ stories and basement; 6 rooms; retaining wall in rear.

Fla., Daytona.—Mrs. S. H. Gove is reported to erect residence on Orange Island.

Fla., Ocala.—Geo. McKean will not erect dwelling, as lately reported.

Fla., Tampa.—Clayton & Dean will expend \$3500 to erect dwelling; 22x58 ft.; 2 stories; ordinary construction; metal shingle roof; plans and construction by owner. (Lately noted.)

Fla., Palatka.—J. B. Flinn will erect several bungalows.

Ga., Atlanta.—R. H. Lowndes will erect 6-room dwelling at 65 Blue Ridge Ave.; cost \$3000; day labor.

Ga., Atlanta.—Edw. Van Valkenburg will erect residence; brick veneer; 2 stories; steam heat; tile roof; hardwood floors, tiled baths; promenade tile; Henrietta C. Dozier, Archt., Hurt Bldg., Atlanta.

Ga., Atlanta.—F. A. Quillian will erect two frame residences to cost \$3300.

Ga., Atlanta.—J. A. Simmons has plans by C. E. Frazier, Atlanta, for residence at 675

Ponce De Leon Ave.; 10 rooms; 2 stories; brick veneer; cost \$8000; day labor.

Ga., Atlanta.—Rhett & O'Beirne are having plans prepared by Henrietta C. Dozier, Hurt Bldg., Atlanta, for residence; 2 stories; brick veneer; probably hardwood floors.

Ga., Atlanta.—R. H. Williamson will erect residence; 2 stories; frame; furnace heat; stone foundation; cost \$4000; day labor; Lella Ross Wilburn, Archt., Peters Bldg., Atlanta. (Lately noted.)

Ga., Atlanta.—Edw. R. Hays will expend \$3500 to erect residence; 36x48 ft.; frame; composition roof; steam heat to cost \$600; day labor. (Lately noted.)

Ga., Augusta.—A. V. Kirach will erect number of small dwellings on alley near Gwinnett St.; total cost \$4000.

Ga., Grantville.—Grantville Hosliery Mill will erect 8 frame tenement-houses of four and five rooms each; Park A. Dallis Co., Archt., 913 Candler Bldg., Atlanta.

Ga., Decatur.—P. L. Weeks will erect two dwellings; one story; frame; electric lights; stone foundations; furnace heat; hardwood floors; cost \$5000; Lella Ross Wilburn, Archt., Peters Bldg., Atlanta.

Ga., Mchen.—H. W. Bullard will erect two-story brick-veneer dwelling; slate roof; furnace heat; hardwood floors; cost \$4500; Lella Ross Wilburn, Archt., Peters Bldg., Atlanta.

Ga., Smyrna.—L. Thornton has plans by Lella Ross Wilburn, Peters Bldg., Atlanta, for residence; 1½ stories; frame; stone foundation; furnace heat; electric lights; hardwood floors; cost \$3500.

Ky., Louisville.—D. W. Dickinson will erect frame cottage at 818 E. 35th St.; cost \$3500.

Ky., Louisville.—T. J. Casey will erect frame dwelling at 619 S. 37th St.; cost \$3000.

Ky., Louisville.—Al M. Emler will erect residence at 1464 Cherokee Rd.; garage in basement; cost \$10,000; 2 stories; ordinary construction; tile roof; hot-water heat to cost \$1000; electric lighting; Henry H. Diehl, Archt., City Engineer's office, Louisville. (See Machinery Wanted.)

La., New Orleans.—James Chaloron will erect 2-story frame residence at 1519 Pine St.; cost \$4850.

La., New Orleans.—E. H. Singreen will erect 2-story frame residence at 1109 Fern St.; cost \$5300.

La., New Orleans.—W. R. Gilbert will erect 3 one-story frame residences; cost \$5500.

La., New Orleans.—A. Garrett will erect 2-story frame dwelling at 7443 Maple Ave.; cost \$4000.

La., New Orleans.—Charles McCormick will erect residence at 1326 Fern St.; 1 story; frame; cost \$4000.

La., New Orleans.—Emile Kieffer will erect residence at 2904 Ursuline St.; one story; frame; cost \$3700.

La., New Orleans.—H. C. Reith will erect residence at 825 Eleonore Ave.; 1 story; frame; cost \$3400.

La., New Orleans.—Dr. D. G. Williams will erect residence at 8419 Pritchard Pl.; 2 stories; frame; cost \$3000.

Maryland.—Dr. M. H. Carter of Resinol Chemical Co., 517 W. Lombard St., Baltimore, Md., is reported to erect residence on Severn River.

Md., Baltimore.—Provident Realty Corp., Garrison and Piedmont Aves., has plans by Henry J. Tinley, 312 N. Charles St., Baltimore, for three 2½-story frame cottages; one at 2214 Roslyn Ave., one on east side Roslyn Ave. near Carlisle and other on west side Roslyn Ave. near Bateman Ave.; 23x34 ft.; cost \$11,500.

Md., Catonsville.—Leonard W. Porter, Smithwood Ave., has plans by J. R. Gerwig, 1811 N. Ashburton Ave., Baltimore, for 6 dwellings at Massachusetts & Monastery Aves.; 2 stories; brick; 20x30 ft. each; cost \$9000; construction by owner.

Md., Roland Park.—B. Howell Griswold, Jr., Mondawmin, Baltimore, Md., is having plans prepared by Laurence H. Fowler, 347 N. Charles St., Baltimore, Md., for alterations to residence at Edgevale and Harvest Rds.

Miss., Jonestown.—G. W. Butler has plans by Mahan & Broadwell, Memphis, Tenn., for residence; 2 stories; brick and stucco; cost \$8000.

Miss., Shelby.—Mrs. George Shelby has plans by Mahan & Broadwell, Memphis, Tenn., for residence; 2 stories; brick; cost \$8000.

Mo., Kansas City.—Earl C. Haller will erect stucco veneer dwelling at 5128 Main St.; cost \$3750.

Mo., Kansas City.—J. C. Crow will erect stucco veneer dwelling at 6012 McGee St.; cost \$4000.

Mo., Kansas City.—Mrs. Judith Mitchell will erect stucco veneer dwelling at 6421 Central St.; cost \$3000.

Mo., Kansas City.—Maud Gray will erect 5 frame dwellings at 3016-24 Walroad St.; cost \$10,000.

Mo., St. Louis.—Gilbert Anderson will erect 2-story dwelling at 3308 Winnebago St.; cost \$3000.

Mo., St. Louis.—G. Anderson will erect 1-story dwelling at 3541 Grace St.; cost \$3000.

Mo., St. Louis.—M. A. Craig will erect 2-story dwelling at 5929 Deliverville St.; cost \$3500.

Mo., St. Louis.—Monroe Construction Co. will erect five 1-story dwellings at 1133-37-39-43-45 Hereford St.; cost \$10,000.

Mo., St. Louis.—F. W. Schuburk will erect residence in Country Club Place; matt brick laid in Flemish bond in white mortar; 12 rooms and 3 baths; green and purple variegated slate roof; hardwood floors except sanitary floor in kitchen; bathrooms of hexagon tile and marble; steam heat; plans by and construction under supervision of P. J. Bradshaw, St. Louis.

N. C., Eagle Springs.—B. F. Butler will erect concrete dwelling and tenant-house. (See Land Developments.)

N. C., Statesville.—W. A. Sample will erect bungalow on Kelly St.; cost \$5000.

S. C., Anderson.—Wm. Menefield will erect residence; 2 stories; frame; electric lights; probably hardwood floors; cost \$3000; Lella Ross Wilburn, Archt., Peters Bldg., Atlanta.

S. C., Charleston.—Josie Knoebloch will erect dwelling at 92 Bull St.; cost \$3000.

Tenn., Memphis.—Mrs. Sam Frank has plans by Mahan & Broadwell, Memphis, for residence on Stonewall Pl.; 9 rooms; classic style; cut-stone exterior.

Tenn., Covington.—Overstreet, Spencer & Paine, Jackson, Miss., prepared plans for residence to cost \$20,000.

Tenn., Jackson.—C. E. Pigford will erect residence; cost about \$15,000.

Tenn., Memphis.—W. E. Shaw will erect 2 frame residences at 1629-31 Southern Ave.; cost \$1400.

Tex., El Paso.—Phoenix El Paso Co. will erect brick bungalow at 3421 Montana St.; cost \$3000.

Tex., El Paso.—W. L. Pringle will erect stone and brick rooming-house at 321 W. Missouri St.; cost \$7500.

Tex., El Paso.—Neel-Cassidy Co. will erect brick bungalow at Grant and Montana Sts.; cost \$4000.

Tex., Houston.—Dr. B. B. Liles will erect residence at Harrisburg Rd. and 3d St.

Tex., Houston.—R. S. Sterling Investment Co. will erect four 6-room and two 7-room residences; cost \$27,000.

Tex., Houston.—William A. Wilson Co. will erect dwelling on Walker St.; 7 rooms; cost \$3500.

Tex., Houston.—Frances Thell will erect 8-room residence on Scott St.; cost \$4250.

Tex., Houston.—O. W. Eyrich and Wm. A. Wilson will erect 7-room residence; cost \$2500.

Tex., Houston.—O. A. Coons Building Co. will erect 5-room residence on Mt. Vernon St.; cost \$3000.

Va., Norfolk.—W. J. Mason will erect six dwellings; two stories; brick; cost \$6000.

Va., Richmond.—Geo. D. Morgan will erect 2-story brick dwelling on Park Ave.; cost \$9000.

Va., Norfolk.—A. H. Foreman will erect residence.

Va., Norfolk.—W. H. C. Ellis opened bids to erect residence in Studley Ave.; S. D. Brown, Norfolk, is lowest bidder at \$5300.

Va., Richmond.—W. F. Drinkard will erect 2-story brick residence on Hanover St.; cost \$3250.

Va., Richmond.—J. S. Smith will erect 2-story brick dwelling on Cary St.; cost \$4000.

GOVERNMENT AND STATE

D. C., Anacostia.—Barns.—Department of Interior opened bids to erect 2 cow barns at Government Hospital for Insane; Melton Construction Co., 1012 H St. N. W., Washington, is lowest bidder at \$28,000; 37x193 ft.; frame; shingle roof. (Lately noted.)

D. C., Washington.—Soldiers' Home.—W. T. Wood, U. S. Army Treasurer, receives bids until July 3 to furnish material and erect complete, with heating, plumbing, gas piping, wiring and electric fixtures, dwelling on grounds of U. S. Soldiers' Home; plans and specifications on application; also opened bids to install 3 passenger elevators in Sheridan, Sherman and Scott buildings;

Warsaw Elevator Co., 111 Mercer St., Baltimore, is lowest bidder.

Tex., Abilene.—Epileptic Colony.—State is having plans prepared by Waller Architectural Co., Fort Worth, for first of 2 buildings for epileptic colony, for which Legislature appropriated \$35,000; brick; 2 stories; bids reported to be received by July 3.

Va., National Soldiers' Home.—Officers' Quarters.—Office of F. E. Skinner, Treas. Southern Branch, N. H. D. V. S., National Soldiers' Home, Va.—Bids until July 16 for labor and material for repairs to Officers' Quarters, buildings Nos. 2, 3, 5 and 7; plans and specifications in office of Treas.

Va., Williamsburg.—Hospital.—Directors of Eastern State Hospital are having plans prepared by Jas. W. Lee, 408 Seaboard Bank Bldg., Norfolk, for infirmary building. (Lately noted considering plans to erect building to cost \$13,000.)

W. Va., Moundsville.—Hospital.—West Virginia State Board of Control, W. F. Rhoad, Bldg. Engr. and Archt., Charleston, W. Va., will begin about July 1 erection of penitentiary hospital for tubercular patients; tile flooring; separate kitchen and dining-room; 3 baths; cost about \$8000. (Lately noted.)

HOTELS

Ala., Mobile.—J. W. Apperson will erect hotel to replace Montross Hotel; 3 stories; 100 rooms; steam heat; elevators; call bells; cost \$25,000.

Ark., Ashdown.—Dr. and C. A. Bishop will erect hotel.

Fla., Punta Rassa.—Company is being organized, with capital stock of \$50,000, by Jas. D. MacGlashan, Fort Myers, Fla., and others to erect 50-room frame hotel, bathing and dancing pavilion and clubhouse; F. J. Kennard, Archt., Tampa.

Fla., Eustis.—Grand View Hotel, J. F. Mayers, Prop., is erecting addition to hotel; 22 rooms with baths; also construct kitchen and lobby.

Ky., Danville.—General Construction Co., Louisville, Ky., is reported interested in organizing company to erect hotel.

Okla., Tulsa.—A. F. Ault has plans for hotel, office and store building. (See Bank and Office Buildings.)

N. C., Elkin.—W. S. Gough will expend \$12,000 to \$15,000 to erect hotel; 50x125 ft.; 3 stories; brick; metal roof; electric lighting; John A. Burcham, Archt., Elkin; date of opening bids not set. (Lately noted.)

N. C., Statesville.—Hotel Iredell, C. S. Holland, owner, has plans by Wheeler & Stern, Charlotte, N. C., to remodel hotel; ordinary construction; tin roof; steam heat; date of opening bids not set. Address proposals to Archt. (Lately noted.)

Okla., Antlers.—R. O. Kelly will erect hotel and business block on S. High St.; cost several thousand dollars.

MISCELLANEOUS

Ala., Spring Hill.—Home.—Episcopal Church Home Com., John E. Mitchell, Secy., Mobile, approved preliminary sketches by John A. Wetzel, Mobile, for home; administration building and 3 to 4 cottages; accommodations for 150 children; fireproof; steam laundry machinery; gymnasium; shower baths; cost \$45,000 to \$50,000. (Lately noted.)

D. C., Washington.—Hall.—Clarke Waggonman, 1124 Connecticut Ave. N. W., prepared plans for store, hall and office building. (See Stores.)

Fla., Daytona.—Parish-house.—St. Paul's Catholic Church will erect parish-house. Address The Pastor.

Fla., Punta Rassa.—Pavilion and Clubhouse.—Company is being organized by Jas. D. MacGlashan, Fort Myers, Fla., and others to erect bathing and dancing pavilion, clubhouse, etc. (See Hotels.)

Fla., Tampa.—Hospital.—Victor L. Knight, Elsi Knight, Joaquin Lopez and others are reported to erect hospital at Jefferson and Lafayette Sts.; 4 stories; brick or brick veneer; 30 rooms; at least 2 wards.

Ga., Atlanta.—Clubhouse.—Atlanta Athletic Club has plans by Hentz & Reid, Atlanta, for clubhouse at East Lake; English style; main building 2 stories and basement; fireproof; first story finished in mission brick; tile roof; fireproof inner lining of walls of hollow tile; living-room floor of maple over concrete base; shower baths, steel lockers; chauffeurs and servants' quarters and heat-

ing plant; frame left wing for ballroom, with special grade maple floor; right wing for dining hall, living-room, kitchen, etc.; cost of building \$68,500; plumbing \$11,200; furnishing \$15,000. (Previously noted.)

Ga., Marietta.—Parish-house.—St. James Episcopal Church has plans by Henrietta C. Dozier, Hurt Bldg., Atlanta, for parish-house; probably hollow tile; cost \$5000.

Ky., Louisville.—Gymnasium.—Highland Boy Scouts have plans by Hugh L. Nevin, Louisville, for building at 2013 Slaughter Ave.; 35x70 ft.; shower baths; cost \$3000.

Md., Bowie.—Fair.—Southern Maryland Agricultural Fair Assn. is constructing race-track, etc.; stable for 600 horses; grandstand to seat 3000; three-eighths mi. race chute; reported cost \$50,000.

Md., Catonsville.—Parish Hall.—St. Mark's Catholic Church, Rev. Edw. A. Williams, pastor, opens bids in about 2 weeks through Geo. R. Callis, Jr., Archt., 55 Knickerbocker Bldg., Baltimore, to erect parish hall; 40x100 ft.; 1 story and basement; tin and slate roof; steam heat; electric lighting. (Lately noted.)

Miss., Waynesboro.—Restaurant.—Fagan-Peel Co. is reported to erect addition to building for offices, etc. (See Bank and Office.)

Okla., Ardmore.—Pavilion.—Geo. R. Cravens will erect dancing pavilion near Lorena Park.

S. C., Columbia.—Clinic.—Columbia Clinic Association, Mrs. E. B. Wallace, representative, is reported as to erect clinic building on W. Gervais St.

S. C., Columbia.—Orphanage.—Epworth Orphanage, W. B. Wharton, Supt., will erect dormitory; 2 stories; 19 rooms; ordinary construction; metal slate roof; electric lighting; let contract in late summer or early fall.

S. C., Greenville.—Entrance.—Graceland Cemetery Assn. will erect entrance building at Graceland Cemetery to contain waiting-rooms, mausoleum type; receiving vault, containing separate crypts with combination locks on each, vault for books, etc.

S. C., Rock Hill.—Clubhouse.—Rock Hill Country Club, N. G. Walker, Prest., will erect clubhouse, construct 18-hole golf links and several tennis courts.

Tenn., Memphis.—Roof Garden.—Joe Fleece and Joe Mewborn have plans by Mahan & Broadwell, Memphis, for roof garden on Falla Bldg.; 60x100 ft.; percola; fountain in center; 2-story observation tower 25x40 ft.; dance pavilion.

Tex., Galveston.—Shed.—Harris-Irby Cotton Co. is reported to erect cotton concentration shed on Avenue E between 42d and 43d Sts., covering block; cost \$30,000 to \$40,000.

Tex., Austin.—Chapel.—Oakwood Cemetery Assn. let contract at \$4388 to James Watterston, Austin, to erect mortuary chapel at Oakwood Cemetery.

Tex., El Paso.—Sanatorium.—Hendricks Sanatorium Co., R. D. Harvey, Prest. and Gen. Mgr.; Dr. Chas. M. Hendricks, V.-P. and Secy.; will erect sanatorium in Mesa Heights Addition; Spanish style; 75 rooms, each with private baths and sleeping porch; "T" shape; 2 stories; cold-storage and refrigerating plant; roof garden; electric lights; cost about \$125,000.

Tex., Fort Worth.—Clubhouse, etc.—Fort Worth Club opens bids middle of July, through Muller & Pollard, Archts., 717 Fort Worth National Bank Bldg., Fort Worth, to erect club and office building; previously noted. (See Bank and Office Buildings.)

Va., Portsmouth.—Orphanage.—Portsmouth Orphanage Association, 525 North St., reported to erect orphanage on Rodman Heights; brick construction; cost \$7000 to \$8000.

Va., Roanoke.—Parish-house.—Christ Protestant Episcopal Church, Rev. G. Otis Mead, rector, will erect parish-house. (See Churches.)

RAILWAY STATIONS, SHEDS, ETC.

Ga., Springfield.—Savannah & Northwestern Ry., Richard Morgan, Gen. Mgr., Savannah, Ga., is reported to erect depot.

Miss., Richton.—New Orleans, Mobile & Chicago R. R. Co., B. V. Wright, Ch. Engr., Laurel, Miss., will erect 21x154-ft. depot; cost \$3000; shingle roof; construction by company's force. (Lately noted.)

Tex., El Paso.—Galveston, Harrisburg & San Antonio Ry., D. K. Colburn, Ch. Engr., Houston, Tex., is reported contemplating erecting freight station; brick and reinforced concrete; 2 stories; cost \$75,000.

Va., Suffolk.—Seaboard Air Line Ry. Co.,

W. D. Faucette, Chief Engr., Norfolk, Va., will erect brick passenger station.

SCHOOLS

Ala., Auburn.—City voted \$10,000 bonds to be used in connection with \$15,000 subscribed by citizens to erect high school; J. W. Wright, Mayor. (Lately noted to receive bids until July 3 for construction.)

Ala., Florence.—City will not vote on \$30,000 bonds to erect school; rescinded call for election; N. P. Morrison, Mayor. (Lately noted.)

Fla., Bartow.—Special School Dist. No. 13 voted \$15,000 bonds for school. Address School Commrs.

Fla., Citra.—Board of Public Instruction, Ocala, Fla., has plans by Geo. Mackay, Ocala, for school; brick; tile roof; heaters; cost \$11,000; date of opening bids not set.

Fla., Dunedin.—Dixie M. Hollins, Supt. of Public Instruction of Pinellas county, receives bids until July 10 to erect brick school; plans and specifications by Sargent, Hamilton & Co., Jacksonville.

Fla., Lemon City.—Dade County Board of Public Instruction, Miami, Fla., has plans by Geo. L. Pfeiffer, Lemon City, for school; bids received until June 30 for general work, plumbing and electric installation.

Fla., Miami.—W. C. De Garmo, Archt., Board of Trade Bldg., Miami, receives bids until July 13 to erect Allapattah, Highland Park, Buena Vista Schools and addition to Second Street School; plans and specifications on application. (Lately noted.)

Fla., Seffner.—Marshall Moore, Supt. of Schools, Tampa, receives bids until July 7 to erect 2-story school; plans and specifications by Willis R. Biggers, Tampa, on file at office of Mr. Moore at Tampa. (Previously noted.)

Fla., Tampa.—Hillsboro County School Board, Marshall Moore, Supt. of Public Instruction, receives bids until July 7 to erect two 1-story schools at Central and Hannah Aves., Seminole Heights; plans and specifications at office of Bonfoey & Elliott, Archts., Tampa.

Fla., Tampa.—School Dist. No. 45, West Tampa, votes July 21 on \$60,000 bonds for schools; to provide addition to Cuesta school, cost \$14,000; school building at Main St. and Willow Ave., \$14,000; school for colored pupils, \$2500; purchase of sites, furniture and fixtures, etc.; Marshall Moore, Secy. Board of Public Instruction. (Lately noted to vote July 2.)

Fla., Umatilla.—Umatilla Special Tax School Dist. plans to erect addition to school; 4 rooms and auditorium. Address Dist. School Trustees.

Ga., Canton.—City voted \$35,000 bonds to erect school; fireproof; brick; furnace heat; Howell Brooke, Mayor. (Lately noted.)

Ga., Guyton.—Trustees of South Atlantic Institute authorized issuance of \$12,000 bonds. (Lately noted.)

Ga., Tennesse.—Board of Education will expend \$5000 to erect school building; 2 stories; ordinary construction; metal roof; steam heat to cost \$1000; Alexander Blair, Archt.; Macon; Little & Phillips, Archts., Cordele, Ga. (Lately noted to cost \$10,000.)

Ga., Norman Park.—City voted \$6000 bonds to erect school. Address The Mayor.

La., New Orleans.—State Legislature, Baton Rouge, will consider bill authorizing School Board to issue \$2,000,000 bonds for schools. Address The Mayor.

La., New Orleans.—Board of Administration of Tulane University is reported to have rejected all bids to erect Sophie Newcomb College buildings, to include assembly hall, music and arts building, library, household economics building, chapel, laboratory, gymnasium, domestic science building, pottery building; cost about \$600,000; J. Gamble Rogers, Archt., 470 Fourth Ave., New York. (Lately noted.)

La., Sulphur.—Calcasieu Parish School Board, Lake Charles, La., will acquire site west of Sulphur on Gulf highway as site for proposed agricultural and industrial school to be erected.

Miss., Noxapater.—City has plans by Overstreet, Spencer & Paine, Merchants' Bank Bldg., Jackson, Miss., for school building; cost \$10,000; 2 stories and basement; brick walls; Barrett's specification roofing; plans ready for bids. (Lately noted voting \$14,000 bonds to erect buildings and purchase lands for agricultural high school.)

Md., Federalburg.—City is having plans prepared by Stebelmer Studios, Philadelphia, for school; 100 ft. 8 in. by 81 ft. 2 in.; hollow tile; roofing and heating not determined; cost \$21,000 to \$22,000; no contract. (City lately noted issuing \$15,000 bonds to erect school.)

Miss. Collins.—Covington County Board of Supervisors authorized \$15,000 bonds for agricultural high school.

Mo., Holland.—Directors Consolidated School Dist. No. 1 will expend \$7000 to erect school; ordinary construction; brick; metal roof; heaters to cost about \$500; L. B. Walker, Archt., Poplar Bluffs, Mo.; bids opened July 27. (Lately noted.)

Mo., Kansas City.—School Board will erect 2-story addition to Irving school at 24th St. and Prospect Ave.; brick, stone and concrete; cost \$25,000.

Mo., Moberly.—Board of Education is reported to issue \$86,000 bonds to improve school and erect new structure at Bedford St. and Fisk Ave.

Mo., St. Louis.—City receives bids until July 17 to erect 3 boys' cottages for New Industrial School at Bellefontaine Farms; information on file at office of Prest. Board of Public Improvements. (Lately noted to have \$100,000 available.)

Miss., Mississippi City.—Harrison-Jackson Consolidated School Dist. Trustees open bids about July 10 to erect school; ordinary construction; slate roof; steam heat; electric lighting; cost \$10,000. (Lately noted at Gulfport, Miss.)

N. C., Durham.—Trinity Park School, W. W. Peele, headmaster, will erect dormitory to accommodate 96 students; 48 rooms divided into 4 sections; cost \$25,000; 40x15 ft.; brick; slate roof; steam heat to cost \$500; Hook & Rogers, Archts., Charlotte, N. C.; bids opened July 1.

N. C., Jamestown.—School Trustees have plans by Joel R. Hill, 711 Wach Bank Bldg., Winston-Salem, N. C., for high school; 8 rooms; ordinary construction; 64x72 ft.; No. 1 pine shingle and tin roof; cost \$6000; gravity system of heating to cost \$750; bids opened July 6. (Previously noted.)

N. C., Samarcand.—Dr. Hanford Henderson purchased 100 acres land and will erect buildings for Marlenfeld Open-Air School for Boys.

Okl., Oklahoma City.—Oklahoma County Commrs. receives bids until July 25 to erect 2 additions to school in Luther Dist. W. W. Storm, County Clk.

Okl., Perkins.—City voted bonds to erect school building; address The Mayor. (Lately noted.)

S. C., Charleston.—Board of Trustees of High School, Jos. C. Barbot, Secy., receives bids until July 6 to erect school; plans and specifications at office of Mr. Barbot.

Tenn., Columbia.—City opens bids July 7 through Hart & Gardner, Nashville, Tenn., to erect school building; 191x160 ft.; ordinary construction; 3 stories; sub-basement and basement; metal roof; steam heat; electric lighting; lately noted. (See Machinery Wanted.)

Tenn., Jellico.—T. D. Baird and others have plans by S. W. Easley for county high school; 54x78 ft.; ordinary construction; composition roof; furnace heat; cost \$10,000; date of opening bids not set. (Lately noted.)

Tenn., Knoxville.—Knox County Board of Education will erect schools at Bright Hope, Quarry, Smith's and addition at Sunrise and University Ave.; bids received until June 30.

Tenn., Oakwood, P. O. at Knoxville.—School Board has plans by L. C. Waters, Knoxville, for building on Churchwell Ave.; cost about \$20,000. (Previously noted.)

Tenn., Rockwood.—School Directors, F. H. Clymer, Chmn. Building Comm., receive bids until July 7 to erect 18-room and auditorium school; bids also asked at same time on ventilating, heating and plumbing; plans at offices of Mr. Clymer and H. L. Huntington, Archt., Chattanooga. (Lately noted to cost \$40,000.)

Tex., Dallas.—School Board is reported to receive bids until July 3 to erect addition to Henry Brown School; fireproof; steam heat; 6 or 12 rooms. (Lately noted.)

Tex., Ennis.—City voted \$80,000 bonds for schools. Address The Mayor. (Previously noted.)

Tex., Fort Worth.—Texas Christian University has plans by Sanguinet & Staats, Fort Worth, for Bible School building; 3 stories; 8 classrooms, 4 offices, library and chapel, each of latter with seating capacity of 300; brick and stone; fireproof; composition roof; steam heat; probably open bids in two weeks; cost \$30,000. (Lately noted.)

Tex., Harrisburg.—L. L. Pugh, County Supt. of Education, Houston, receives bids until July 1 to erect school at Park Pl.; plans and specifications at office of Lane & Dowdy, Archts., Houston; also accepted plans for Brookline School. (Lately noted.)

Tex., Lyons.—City voted \$300 bonds to erect school. Address The Mayor.

Tex., Texas City.—John McClellan, Houston, Tex., is not preparing plans for school, as lately reported.

Tex., Waxahachie.—Rural High School Dist. No. 1 voted \$4000 bonds to erect school. Address Dist. Commrs.

Tex., Waco.—Lacy Summit School Dist. voted \$6000 bonds to erect 2-story brick school; accommodations for 250 to 300 students. Address Dist. School Trustees. (Lately noted.)

Va., Glade Springs.—Liberty Hall School Trustees plan to erect school; cost \$5000 to \$10,000.

Va., Ocean View.—Tanners Creek School Board will expend \$10,000 to erect school; 30x62 ft.; ordinary construction; slate roof; hot-air heat; electric lighting; Jas. W. Lee, Archt., 408 Seaboard Bank Bldg., Norfolk. (Lately noted to receive bids until June 30.)

Va., Pulaski.—Pulaski School Dist. voted \$58,000 bonds to erect high school and \$5000 for rural school improvements; Fry & Chesterman, Archts., Roanoke, Va. (Lately noted.)

Va., Richmond.—St. Patrick's Female Academy will erect school at 2000 Grace St.; cost \$19,425.

Va., Petersburg.—City Council on July 7 will consider \$300,000 bond issue to erect schools, municipal building and armory; Robt. Cananiss, Mayor.

W. Va., Gatewood.—Board of Education of Fayetteville School Dist. receives bids until July 18 to erect 6-room school at Pax, 4-room building near Gatewood and 8-room high school at Mt. Hope, W. Va.; plans and specifications at office of A. A. Hedrick, Dist. Supt., Mt. Hope.

W. Va., Mt. Hope.—Board of Education of Fayetteville School Dist. receives bids until July 18 to erect high school. (See W. Va., Gatewood.)

W. Va., Valley Grove.—Board of Education of Liberty Dist., Ohio county, receives bids at office of Chas. D. McCarty, National Exchange Bank Bldg., Wheeling, W. Va., until July 11 to erect 2-room frame school; plans and specifications at office of architect.

STORES

Ala., Lincoln.—Bem Price, Empire Bldg., Birmingham, is preparing plans for store building; 2 stories; brick.

Ala., Northport.—Mrs. Mat Shirley will rebuild 2 stores lately burned.

Ala., Northport.—G. W. Christian will rebuild 3 stores recently burned.

Ala., Sylacauga.—Dr. F. H. Craddock will erect brick store 50x110 ft.

D. C., Washington.—Clarke Waggaman, 1124 Connecticut Ave. N. W., prepared plans for store, office and hall building at Connecticut Ave. and L St. N. W.; 3 stories; 90x73 ft.; first two elevations of Indiana limestone; Italian style; 2 colonnades; 4 stores on ground floor; 12 offices on second floor; hall on third floor.

Fla., Clearwater.—Leonard D. Long, Tampa, prepared plans for business building.

Ga., Atlanta.—J. G. Oglesby, Jr., will remodel building on Broad Street Bridge; concrete floor; 6 stores on lower floor; plate-glass fronts; copper grilling; elevator.

Ga., Atlanta.—J. O. Moore will erect 2-story brick veneer building at 250 Pryor St.; cost \$3750.

Ga., Atlanta.—Lee Tile and Construction Co. and W. H. Wynne will erect 1-story-and-basement business building at 816-18 DeKalb Ave.; cost \$5000.

Ga., Thomaston.—R. E. Chatfield has plans for store and office building. (See Bank and Office.)

Ky., Lexington.—Mark Stevens, 310 S. Broadway Park, will erect store and apartment building. (See Apartment-Houses.)

Ky., Maysville.—John O'Keefe will erect building; 3 stories; brick; lower floor for stores; upper floors, offices.

Ky., Pineville.—Lewis R. Jones will erect store building; 2 stories; 34x100 ft.; brick; will be occupied by Pineville Furniture Co.

La., New Orleans.—Manion & Co. will erect brick addition to building on Lafayette St.; cost \$4500.

Md., Baltimore.—Hanover Shoe Co., 814 Chestnut St., Philadelphia, is having plans prepared by Louis Levi, Estate Trust Bldg., Philadelphia, for building to be occupied by Hanover Shoe Co. and United Cigar Co.; fireproof; low-pressure steam heat; electric lighting; bids opened July 15.

Mo., St. Louis.—Pulitzer Estate will soon let contract to erect building; 8 stories; fire-

proof; site 25x125 ft.; cost \$100,000; contractors estimating: Westlake Construction Co., Mercantile Bldg.; W. M. Sutherland B. & C. Co., Leathe Bldg.; Seldon-Breck Construction Co., Fullerton Bldg.; Jas. Black M. & C. Co., Wright Bldg.; Gamble Construction Co., 615 Chestnut St.; Jas. Stewart, Monward Bldg., all of St. Louis; Mauran, Russell & Crowell, Archts., St. Louis; bids opened July 2. (Lately noted.)

N. C., Burlington.—Jos. A. Isley Bros. Co. will erect block of stores.

N. C., Scotland Neck.—Burroughs-Pittman-Wheeler Co. is reported to expend \$15,000 to \$20,000 to remodel store building.

Okl., Antlers.—R. O. Kelly will erect hotel and business block. (See Hotels.)

Okl., Okmulgee.—P. K. Morton will erect building at 5th and Central Sts.; 2 stories; brick; 57x115 ft.; 4 stores.

Okl., Tulsa.—A. F. Ault has plans for store, office and hotel building. (See Bank and Office Buildings.)

Okl., Oklahoma City.—Kerr Dry Goods Co. will expend \$10,000 to enlarge store building, providing 3000 sq. ft. additional floor space.

Tenn., Columbia.—W. B. Greenlaw is having plans prepared by S. M. McMurray, Columbia, for moving-picture theater, stores and offices; 35x135 ft.; ordinary construction; tin and composition roof; cost \$5000. (Lately noted.)

Tenn., Knoxville.—J. E. Carty will erect building at Vine and Central Sts.; brick; 2 stories and basement; 51x87 ft.; lower floor for stores; upper floor for offices; automatic sprinkler system; fire escapes; provision for 2 additional stories later; cost \$20,000; Chas. I. Barber, Archt., Knoxville.

Tenn., Memphis.—S. H. Kress & Co., 396 Broadway, New York, are reported to expend \$15,000 for improvements to first floor and basement of building.

Tenn., Nashville.—Wm. Litterer will rebuild brick store at 230 N. Third Ave.; cost \$5000.

Tenn., Nashville.—Mrs. Laura Hutchison will erect brick-veneered building on Highland Ave.; cost \$4000.

Tex., Cross Plains.—Higginbotham & Co. are reported to erect building at Main and 8th Sts.; brick; 150x115 ft.

Tex., Fort Worth.—Ed. Farmer will repair brick building at 2d and Houston Sts.; cost \$8000.

Tex., McKinney.—Woodmen of the World will erect store and lodge building. (See Association and Fraternal.)

Tex., Wichita Falls.—Frank Kell has plans by Jones-Orlopp Co., Wichita Falls, for 2 buildings; 1 story; brick; 25x70 ft. and 25x50 ft.; cost \$5000.

Va., Richmond.—Col. F. P. McConnell, care of Manchester National Bank, and others have plans for building for store, offices, bank and lodgerooms. (See Bank and Office.)

BUILDING CONTRACTS AWARDED

APARTMENT-HOUSES

Fla., St. Petersburg.—Mrs. M. A. Barden, Binghamton, N. Y., is reported to have let contract to erect apartment-house; 3 stories; 39 rooms; 29x68 ft.; 194 lin. ft. of porches; cost \$6000; plans by and construction under supervision of B. O. Parkhurst.

Mo., St. Louis.—Jas. A. Cerutti let contract to erect store and apartment-house. (See Stores.)

Mo., St. Louis.—J. M. Wall let contract to erect store and apartment-house. (See Stores.)

Mo., St. Louis.—Chas. G. Stoermer let contract to erect 2 stores and flats. (See Stores.)

Mo., St. Louis.—Catherine Investment Co. let contract to erect 2 tenement-houses. (See Stores.)

Mo., St. Louis.—A. J. Francis let contract to Francis & Wyland to erect 3-story tenement-house at 5588 Waterman St.; cost \$25,000.

Mo., St. Louis.—C. and G. Heitzman let contract to Erdreuegger & Beumer, St. Louis, to erect two 2-story tenements at 4119-27 Kosuth St.; cost \$14,000.

Mo., St. Louis.—Frank L. Dittmeier let contract to J. Hartman, St. Louis, to erect two-story tenement-house at 4207 Holly St.; cost \$4000.

Mo., St. Louis.—H. F. Blunck let contract to J. J. Blunck, St. Louis, to erect 2-story tenement-house at 4416-18 Ashland St.; cost \$4700.

Mo., St. Louis.—Mrs. Rose Mambrick let contract to Harry A. Huger, St. Louis, to

THEATERS

Miss., Waynesboro.—Fagan-Peel Co. is reported to erect addition to building for picture theater, etc. (See Bank and Office.)

Tenn., Columbia.—W. B. Greenlaw has plans for moving-picture theater, store and office building. (See Stores.)

WAREHOUSES

Ala., Montgomery.—Bay City, Lynn Haven & Northern Ry. (H. G. Fisk, New York, and others) is reported to erect warehouses and docks.

Ark., Morrilton.—Morrilton Cotton Warehouse Co., R. D. Earl, Prest., will erect additional warehouse; about 350x320 ft.

Ky., Louisville.—Fireproof Storage Co. will expend \$40,000 to erect warehouse; 33x150 ft.; fireproof; Barrett's specification roof; bids opened July 3; Moores & Dunford, Archts., 940 Otis Bldg., Chicago. (Lately noted.)

La., New Orleans.—Board of Port Commrs. receives bids until July 20 for dredging and filling in Mississippi River preparatory to beginning construction of cotton warehouses, wharves, docks and other terminal facilities, for which \$3,000,000 were voted; estimated amount of filling, 2,000,000 cu. yds.; clearing, 90 acres; structures include 6 cotton warehouses, each 600x100 ft.; 120 ft. high; 8 stories; concrete; fireproof; capacity 54,000 bales each; plans and specifications on file at office of Ford, Bacon & Davis, Engrs., 821 Canal St., New Orleans. (Noted in May.)

Md., Baltimore.—Baltimore Plumbing Supply Co. (J. Frankl. Propr.), 101-03 E. Baltimore St., acquired site at Central and Fairmount Aves., 50x173 ft., and will erect 4-story warehouse; details not determined.

Md., Baltimore.—Atlantic Fertilizer Co., 36 Stock Exchange Bldg., will erect warehouse at Curtis Bay; 1 story; 157x238 ft.; reinforced concrete and steel; contractors estimating are: B. F. Bennett Building Co., 123 S. Howard St.; Singer-Pentz Co., 600 Equitable Bldg.; Chas. L. Stockhausen, Maine National Bank Bldg.; Turner Construction Co., 3496 Bateman Ave., all of Baltimore.

Mo., Kansas City.—Ingle Bros. Broom Corn, Grain & Supply Co. will erect warehouse at 17th and Charlotte Sts.; fireproof; cost \$25,000.

Mo., Kansas City.—L. G. Lebrecht Co. will erect 4-story concrete warehouse.

Mo., St. Louis.—G. A. Heman plans to erect warehouse.

Tenn., Memphis.—J. D. Nathan has plans by G. M. Shaw, Memphis, for Bellevue Theater at Bellevue Blvd. and Linden Ave.; water-tight sliding roof operated by electric motor.

Tex., Houston.—Merchants' Compress Co. will erect warehouses and fireproof cotton sheds to cost \$50,000.

W. Va., Huntington.—Bank Supply Co. will expend \$15,000 to erect warehouse 42x90 ft.; composition roof; V. T. Rittler, Archt., Huntington. (Lately noted.)

erect two 2-story tenements at 5325-31 Terry St.; cost \$15,000.

Mo., St. Louis.—Elsie Doerflinger let contract to A. Doerflinger, St. Louis, to erect two 2-story flats at 3222-28 Utah St.; cost \$10,000.

Mo., St. Louis.—L. Dugan let contract to Victor Architectural & Building Co., St. Louis, to erect 2-story tenement-house at 3659-61 Botanical St.; cost \$7000.

Tex., Paris.—S. H. Hancock let contract to J. T. Finn, Paris, to erect apartment building; 86x66 ft.; cost \$12,000; brick veneer; shingle roof; steam heat; electric lighting; Griffith Borgebaugh & Co., Archts., Paris. (Lately noted under Dwellings.)

Va., Alexandria.—Benedict Wheatley let contract to Jos. Rodgers to erect 2-story brick store and apartment building on King St. between Alfred and Columbus Sts.

Va., Petersburg.—Petersburg Apartment Corp., Jas. E. Cuthbert, Prest., let following subcontracts through general contractor E. R. Brown, 209 W. 13th St., South Richmond, Va., to erect apartment-house: Hoskins & Mitchell, 3204 Chapin St., Richmond, brick work; Stratton & Bragg Co., Petersburg, iron work; Miller Mfg. Co., Richmond, lumber, sash and doors; Edgar Archer Jones, Richmond, lately noted having contract for sheet-metal work; E. Warren Ritchie, Archt., Petersburg.

Va., Lynchburg.—Jno. P. Pettyjohn & Co., 212 8th St., general contractors, let following subcontracts to erect apartment-house: T. B. Dornin-Adams Co., roofing; T. J. Burns & Co., electric wiring; Cleland-Peck Co., plumbing and heating; all of Lynchburg. (Lately noted to cost \$35,000.)

ASSOCIATION AND FRATERNAL

D. C., Washington.—M. M. Parker Lodge No. 27, A. F. & A. M., let following subcontracts for buildings: J. H. Scott, 1212 H St. N. E., brick work; David Goumpf, 1404 Montello Ave. N. E., painting; J. H. Grahe, 1119 10th St. N. W., steam heat; all of Washington; install electric elevator to cost \$2500; L. T. Williams, Archt., 1369 F St. N. E., Washington; general contract (lately noted) let to W. A. Kimmel, 511 Evans Bldg., Washington; cost of building, \$28,000.

Fla., Callahan.—A. F. and A. M. let contract to W. W. Cushing, Callahan, to erect 2-story brick lodge building; cost \$4000. (Lately noted.)

Tex., Austin.—Ancient Free and Accepted Scottish Rite Masons let contract at \$22,962 to Watterson & Ledbetter, Austin, to remodel cathedral at 18th and Lavaca Sts., and at \$2324 to A. E. Hancock, Austin, for lighting and heating; will provide shower baths, pipe organ, etc.; cost \$25,000; Hubbell & Greene, Archts., Dallas, Tex.

Va., Fort Myer.—Knights of Columbus Country Club, Leo A. Rover, Prest., Equity Bldg., Washington, D. C., let contract to S. A. Gaskin & Son, Washington Loan & Trust Bldg., Washington, D. C., to erect clubhouse near Fort Myer; colonial bungalow style; tapestry brick; Indiana limestone trimmings; slate roof; casement windows; verandas; open fireplaces; cement floors in basement; artesian wells; portion 40x44 ft. to be erected first; later erect 2 wings, each 24x26 ft.; cost, including ground preparation, baseball diamonds, tennis courts, etc., \$25,000; Wilson & Pirie, Archts.

BANK AND OFFICE

Ala., Bessemer.—W. J. Long, J. F. Lewis, R. F. Smith and W. H. Lewis are reported to have let contract to Ager & Cline, Birmingham, to erect building to replace Reble Hall; 2 entrances; 110x115 ft.; 5 stories on first floor; 25 offices on each of upper floors; elevators; steam heat; cost \$67,000; W. E. Beams, Archt., Bessemer. (Previously noted.)

Ark., Hot Springs.—Como Security Co., E. H. Johnson, Prest., let contract to erect building for hotel and banking purposes. (See Hotels.)

Fla., Miami.—G. C. Frizzell let contract to erect office and store building. (See Stores.)

Ga., Macon.—Macon Savings Bank let contract to Remington & Sherman, 359 Broadway, New York, for vault work in bank building to cost \$20,000; P. E. Dennis, Archt., 703 American National Bank Bldg., Macon; general contract let to J. H. B. Wilder, Macon. (Lately noted.)

Md., New Windsor.—First National Bank let contract to J. L. Robinson Construction Co., Knickerbocker Bldg., Baltimore, Md., to erect bank building; 1 story; brick and stone; A. C. Leach, Archt., 323 N. Charles St., Baltimore. (Lately noted.)

N. C., Asheville.—Southern Express Co. let contract to G. W. Wrenn & Co., Asheville, to erect building; 34x104 ft.; brick and concrete; clay tile roof; cost \$5000; Smith & Carrier, Archts., Asheville; all subcontracts let and material purchased. (Lately noted.)

S. C., Gray Court.—F. T. Curry will erect store and office building; contract let. (See Stores.)

Tenn., Memphis.—Commercial Trust & Savings Bank let contract to Ed Abele, Memphis, to remodel building at Main St. and Union Ave.; will construct new front and side and remodel first floor for banking quarters; cost \$24,000; G. M. Shaw, Archt., Memphis. (Lately noted.)

W. Va., Charleston.—United Fuel Gas Co. let contract to Ragland-Baxter-Morford Co., Nashville, Tenn., to erect office building; 3 stories and basement, with carrying capacity for 12 stories; faced with stone to second-story level; face brick and architectural terra-cotta from second story to cornice; cost \$60,000; H. Kus Warne, Archt., Charleston; previously noted to have let contract to McClintic-Marshall Co., Pittsburgh, for structural steel. (See Machinery Wanted.)

W. Va., Clarksburg.—C. E. Prunty will expend \$60,000 to erect office and store building; 41x90 ft.; fireproof; built-up composition roof; modulating system of steam heat; Berger's radiant sidewalk lights to cost \$625; passenger elevator, 5x5½ ft., \$3500; S. W. Ford, Archt., Clarksburg; contract for steel work let to J. T. Moss Iron Works, Wheeling, W. Va.; fireproofing, National Fireproofing Co., Pittsburgh, Pa.; terra-cotta, New Jersey Terra-Cotta Co., Perth Amboy, N. J.; brick work, Shinn Bros., Clarksburg; plumbing, F. C. Welch, Clarksburg. (Mr. Ford lately noted preparing plans.)

W. Va., Wheeling.—National Bank of West Virginia will expend \$150,000 to erect bank building; 52x70 ft.; 112 ft. high; C. W. Bates, Archt., Wheeling; contract (lately noted) let to R. R. Kitchen Co., Wheeling.

CHURCHES

Ala., Cullman.—First Baptist Church, Rev. R. E. Lee, Chrmn. Building Comm., let contract to A. M. Leonard, Cullman, to erect building; 78x90 ft.; ordinary construction; tin roof; hot-air heat; electric lighting; cost \$10,000; Edgar L. Love, Archt., 1314 Jefferson Bank Bldg., Birmingham. (Lately noted.)

Ala., Lafayette.—M. E. Church South let contract to B. E. Hudson, Opelika, Ala., at \$18,000 to erect building; 55x100 ft.; pressed brick and stone; slate roof; hot-air heat; indirect lighting; E. & E. A. Zobel, Archt., Lafayette. (Lately noted.)

Ark., Argenta.—First Baptist Church let contract to Phillips & Lamberton, Little Rock, to erect building; cost \$10,000.

Fla., Orlando.—First Baptist Church, Rev. Edw. J. Poulson, pastor, let contract to L. C. Townsend, Anderson, S. C., to erect building; 90x90 ft.; ordinary construction; tile roof; cost \$25,000; J. E. Greene, Archt., Birmingham, Ala. (Previously noted.)

La., New Orleans.—St. Rose de Lima Catholic Church will expend \$60,000 (cost without mechanical equipment) to erect building; brick walls; wood frame; slate roof; low-pressure steam heat; Paul Andry, Archt., 519 Tulane Necomb Bldg., New Orleans; contract (lately noted) let to Geo. J. Glover, Whitney-Central Bldg., New Orleans.

Md., Baltimore.—St. Jerome's Catholic Church, Rev. Jas. P. Holden, pastor, let contract to Monmonier & Sorrell, 1711 McCulloh St., Baltimore, to erect building on Hamburg St. near Scott St.; granite; 130x139 ft.; cost \$80,000; C. E. Tormey, Archt., 813 Newington Ave., Baltimore. (Lately noted.)

Md., Cockeysville.—M. E. Church, Rev. Jno. S. German, pastor, let contract to Fenley & McCann, Cockeysville, to erect parsonage; 32x36 ft.; 2½ stories; stone; slate roof; cost \$4500; hot-air heat, \$250; electric lighting, \$100.

Md., Hagerstown.—First Brethren Church let contract to Geo. B. McC. Wolf, Hagerstown, to erect building; red pressed brick; Indiana limestone and terra-cotta trimmings; granite steps and water table; reinforced concrete baptistry; 2 dressing-rooms with terrazzo floors; steps faced with pink Tennessee marble; pipe organ; Gothic windows; steam heat; cost \$15,000; A. J. Klinkhart, Archt., Hagerstown. (Lately noted.)

Tenn., Trenton.—Baptist church let contract to Mr. Inlow, Martin, Tenn., to erect building; main auditorium and balcony to seat 700 to 800; assembly hall and 15 Sunday-school rooms in basement; steam heat; cost \$17,000.

CITY AND COUNTY

Ark., Harrison.—Jail.—Boone County Commissioners let contract to Denney, Clark & Turpin, Harrison, to erect fireproof jail; cost (including mechanical equipment) \$13,600; steam heat; electric lighting; contract for steel work let to Southern Structural Steel Co., San Antonio, Tex. (Lately noted.)

Ark., Ozark.—Jail.—Franklin County Commissioners will erect jail; 32x40 ft.; 2 stories; fireproof; concrete, tar and gravel roofing; electric lighting; cost \$5700; Frank W. Gibb & Co., Archts., Little Rock; contract let to Claude Talley, Ozark.

Fla., St. Petersburg.—Fire Department.—City let contract A. E. Eble, 235 6th Ave. N., St. Petersburg, to erect substation for fire department; 32x40 ft.; 2 stories; brick; asphalt shingle roof; cost \$4500; gas and electric lighting; M. E. Benjamin, Archt., 424 Central Ave., St. Petersburg. (Lately noted.)

Ga., Moultrie.—Jail.—Colquitt county has plans by and let contract to Southern Structural Steel Co., Birmingham and San Antonio, to erect jail; fireproof; steam heat; electric lighting; cost \$30,000; lately noted. (See Machinery Wanted.)

La., New Orleans.—Shed.—Board of Port Comms. let contract to American Sheet Metal Works, New York, at \$3124 for corrugated-iron siding, gutter, office sashes, doors and ceilings, and sliding doors for Pauline St. shed; to H. W. Johns-Manville Co., New York, at \$4185 for roofing; Saml. Young, Engr., L. H. Guerin, Consult. Engr., Perrin Bldg., New Orleans. (Lately noted.)

Mo., St. Louis.—Hospital.—City will expend \$250,000 (cost without mechanical equipment) to erect isolation hospital; 2 V-shaped

wings, 145x42 ft. each; fireproof; tile roof; steam heat from central plant now in place; cost \$6500; Guy C. Mariner, Archt., Chemical Bldg., St. Louis; contract (lately noted) let to Kellerman Contracting Co., Roe Bldg., St. Louis.

Okla., Sulphur.—Jail.—Murray county let contract to Scott and Frier, Sulphur, to erect jail; cost \$5000.

COURTHOUSES

Okla., Madill.—Marshall County Comms. let contract to erect courthouse; 82x89 ft.; fireproof; reinforced concrete; Johns-Manville roofing; steam heat; cost \$75,000. (Lately noted.)

DWELLINGS

Ala., Bay Minette.—Wade Irwin has plans by and let contract to O. G. Sholler, Bay Minette, to erect frame residence; bay shingles; pine flooring; gas and electric fixtures; cost \$3000.

Ala., Birmingham.—James Toole let contract to O. D. Metlock, Birmingham, to erect store and dwelling. (See Stores.)

D. C., Washington.—J. Bartlett Hills, 13th and N Sts., will expend \$6000 to erect dwelling; 25x33 ft.; fireproof; slate roof; hot-water heat; electric lighting; concrete sidewalks; cost \$6000; Mack Williams, Archt., 1408 14th St., Washington; contract (lately noted) awarded to D. F. Swab, 426 Rittenhouse St., Washington.

D. C., Washington.—C. C. Glover, Jr., let contract to A. L. Smith & Co., Woodward Bldg., Washington, to erect dwelling at 43d and Lowell Sts. N. W.; cost \$40,000; Nathan C. Wyeth, Archt., 1517 H St. N. W., Washington.

D. C., Washington.—W. H. Searle let contract to W. S. Spencer, 216 Bond Bldg., Washington, to erect dwelling at 1810 Wyoming Ave.; cost \$10,000; Marsh & Peters, Archts., 520 13th St. N. W.

Fla., Miami.—Geo. Sykes Co., 314 E. 34th St., New York, general contractor for Jas. Deering's residence, let following subcontracts: Waterproofing, T. New Construction Co., 515 W. 29th St.; plumbing, J. B. Blair, 349 Park Ave.; vacuum cleaning, Dunn's Improved Vacuum System, 108 W. 34th St.; steel, Phoenix Iron Co., 49 Williams St.; refrigerating machine, H. Johns-Manville Co., 41st St. and Madison Ave.; vaults and safe, Remington & Sherman Co., 359 Broadway; all of New York; structure about 120x120 ft.; concrete; 60-ft. court in center; reported cost, \$500,000; F. Burrall Hoffman, Jr., Archt., 15 E. 40th St., New York. (Lately noted.)

Fla., Miami.—Dr. W. S. Gramling, F. H. Wharton, J. L. Hindon, C. Perry, L. B. Boyd and S. A. Belcher are reported to have let contracts to erect dwellings at Ocean Beach.

Fla., Pensacola.—Howard White let contract to Mr. Franklin, Pensacola, to remodel residence; 30x60 ft.; frame construction; vulcanite shingle roof; gas and electric lighting; Alfred & Alfred, Archts., Pensacola.

Fla., Tampa.—C. C. Burns will expend \$10,000 to erect dwelling; 50x50 ft.; mill construction; tile roof; electric lighting to cost \$250; F. M. Curtis, Archt., First National Bank Bldg., Tampa; general contract (lately noted) let to B. F. Walker & Son, Tampa; contract to D. W. Shea for plumbing and to Lewis & Bethel for roofing; both of Tampa.

Fla., Tampa.—E. W. Pyburn has plans by and let contract to Clayton & Dean, Tampa, to erect dwelling; 22x58 ft.; 2 stories; ordinary construction; metal shingle roof; cost \$3500.

Fla., Tampa.—E. J. Keefe let contract to H. S. Stephenson, Tampa, to erect residence; ordinary construction; rubber shingle roof; cost \$4000; W. M. Marsh, Archt., Jacksonville, Fla. (Lately noted.)

Fla., Tampa.—W. A. Williams has plans by and let contract to Clayton & Dean, Tampa, to erect dwelling; ordinary construction; slate roof; cost \$4000.

Ga., Atlanta.—A. C. Walters let contract to J. H. Esteg, 78 E. 9th St., to erect residence; 2 stories; stone-veneer; furnace heat; hardwood floors; slate roof; tile and cement floors; cost \$7000; plans by Leila Ross Wilburn, 305 Peters Bldg., Atlanta.

Ga., Atlanta.—Misses Fanny and Bertha Thrasher let contract to R. P. Pool, 481 N. Boulevard, to erect residence; stone foundation; furnace heat; cost \$4700; plans by Leila Ross Wilburn, 305 Peters Bldg., Atlanta.

Ga., Atlanta.—D. B. Mitchell let contract to J. J. Harvil, Atlanta, to erect frame dwelling at 166 Griffin St.; cost \$3000.

Ga., Atlanta.—Hudson Moore let contract to C. Shelverton, Atlanta, to erect 2-story

brick and stucco residence; cost \$15,000. (Previously noted.)

Ga., Atlanta.—Mrs. Lucy Higgs let contract to C. Shelverton, Atlanta, to erect 2-story residence at Ansley Park; cost \$11,000. (Lately noted.)

Ga., Augusta.—J. Lee Etheridge let contract to Woodward Contracting Co., Augusta, to erect residence; 2 stories; frame; cost \$9500.

Ga., Augusta.—H. C. Twigg let contract to E. W. Hancock, Augusta, to erect residence; 30x40 ft.; 2 stories; frame; ordinary construction; metal shingle roof; grates; electric lighting; cost \$3000; Thos. M. Campbell, Archt., Augusta. (Lately noted.)

Ga., Augusta.—Mrs. Henry C. Tinker let contract to C. B. Holley, Augusta, to erect residence on Milledge Rd.; brick; cost about \$25,000; Henry P. White, Archt., Boston, Mass.

Ga., Macon.—Society for African Missions, J. Lessner, Prest., let contract to erect dwelling and school. (See Schools.)

Md., Baltimore.—Wm. H. Aten, 701-703 Poplar Grove St., let contract to J. E. Stanfield, 1828 Lansdowne St., Baltimore, to erect dwelling at 701-703 Poplar Grove St.; 3 stories; brick; 30x60 ft.; slag roof; hot-water heat; cost \$4500; F. E. Beall, Archt., 306 St. Paul St., Baltimore.

Md., Baltimore.—W. A. Dixon, 110 W. German St., let contract to Cowan Building Co., 106 W. Madison St., Baltimore, to erect residence at Guilford; Laurence H. Fowler, Archt., 347 N. Charles St., Baltimore. (Lately noted.)

Md., Baltimore.—T. D. Young will erect residence on Chancery St.; 38x34 ft.; 2½ stories; frame; cost \$8000; Gladfelter & Chambers, Contrs., 2974 Woodberry Ave., Baltimore; E. L. Palmer, Archt., 408 Roland Ave., Roland Park, Md.

Mo., St. Louis.—Catherine Investment Co. let contract to erect store and dwelling. (See Stores.)

Mo., St. Louis.—J. T. Dryden let contract to Fred H. Menke, St. Louis, to erect 2-story dwelling at 4520 Athlone St.; cost \$3500.

Mo., St. Louis.—Hoors Brandt let contract to F. W. Schramm, St. Louis, to erect six 2-story dwellings at 4222-4-8-32-4-8 Shenandoah St.; cost \$15,000.

Mo., St. Louis.—John J. Dalton let contract to E. R. Donnelly, St. Louis, to erect 2-story dwelling at 5213 Nottingham St.; cost \$3000.

Mo., St. Louis.—W. S. Wiatt let contract to Wm. Scates to erect 2-story dwelling at 4506-08 Lewis Pl.; cost \$3000.

N. C., Asheville.—B. C. McVey let contract to G. W. Wrenn & Co., Asheville, to erect dwelling; stone foundation; wood frame; concrete; tile terrace and porches; cost \$6300; Smith & Carrier, Archts., Asheville; all subcontracts let and materials purchased.

N. C., Asheville.—Miss Byrom let contract to G. W. Wrenn & Co., Asheville, to erect dwelling; brick foundation; wood walls with stucco and shingle; Old English style; cost \$5000; Chas. N. Parker, Archt.; all subcontracts let and material purchased.

N. C., Winston-Salem.—C. S. Starbuck, Box 123, let contract to Fogel Bros. Co., Winston-Salem, to erect dwelling; 36x56 ft.; cost \$5400; mill construction; shingle roof; hot-air heat to cost \$375; gas and electric lighting; W. C. Northrup, Archt., Winston-Salem; contract for painting let to W. H. Clineard, Winston-Salem; lately noted. (See Machinery Wanted.)

Okla., Oklahoma City.—K. G. Stiles, 2829 Classen Blvd., has plans by and let contract to Stewart & Wilderson, 4th floor American Bldg., Oklahoma City, to erect residence; 28x34 ft.; cost \$4000; frame; shingle roof; hot-air heat to cost \$150; electric lighting. (Lately noted.)

Tenn., Memphis.—Mrs. H. S. Arthur has plans by and let contract to W. Fairley, 239 E. Iona Ave., Memphis, to erect residence; 30x45 ft.; mill construction; tin roof; hot-air heat; gas and electric lighting; cost \$4000. (Contract lately noted let to Balton & Sons.)

Tenn., Nashville.—W. L. Bainbridge let contract to L. A. Nelson to erect dwelling; 8 rooms; ordinary construction; composition shingle roof; hot-air heat; cost \$5000; S. M. McMurray, Archt., Nashville. (Lately noted.)

Tex., Fort Worth.—John Ward Harrison is erecting residence at River Crest; brick and timber; English style; mill construction; cost \$13,000; vapor heat to cost \$900; electric fixtures, \$250; Muller & Pollard, Archts., Fort Worth; contract let to W. R. Knox.

Tex., Plainview.—J. F. Garrison closed contract with E. L. Kerr & Son to erect crushed marble stucco residence; cost \$7500.

Tex., Plainview.—T. B. Campbell let contract to J. B. Maxey, Plainview, to erect brick veneer residence on W. 3d St.; cost \$8000.

Va., Norfolk.—Ralph Kanter let contract to S. D. Brown, Norfolk, to erect residence; 2 stories; brick; cost \$8000; Louis R. Moss, Archt., Norfolk. (Lately noted.)

W. Va., Wheeling.—John Lohler let contract to E. O. Krimm to erect 8-room residence on 24th St.

W. Va., Wheeling.—Mrs. Rebecca Walter let contract to Killeen Lumber Co. to erect 10-room residence at Indiana and North Broadway.

GOVERNMENT AND STATE

Ky., La Grange.—Postoffice.—C. N. Goldsborough let contract to L. J. Smith, La Grange, to erect building for postoffice; 50x20 ft.; ordinary construction; tin roof; electric lighting; cost \$5000; O. P. Reuter, Archt., Louisville, Ky. (Lately noted.)

N. C., Tarboro.—Postoffice.—Treasury Department, Oscar Wenderoth, Supervising Archt., Washington, D. C., let contract at \$55,268 to R. P. Farnsworth & Co., Owensboro, Ky., to erect postoffice; 2 stories and basement; 4100 sq. ft. ground area; stone facing; tin roof. (Lately noted.)

Okla., Darlington.—Lavatory.—Comms. of Indian Affairs, Washington, D. C., let contract to Geo. D. Clark & Son, Enid, Okla., at \$764 to construct lavatory building at Cheyenne and Arapaho Indian School; 1 story; 48x34 ft.; concrete foundation, walls and footings; connects with girls' dormitory by passageway 11x20 ft.; hot-water heat; acetylene-gas lighting. (Lately noted.)

Tenn., Springfield.—Postoffice.—Treasury Dept., Oscar Wenderoth, Supvr. Archt., Washington, D. C., let contract to Consolidated Engineering Co., 243 Calvert Bldg., Baltimore, Md., to erect postoffice from foundation; cost \$60,000. (Contract previously noted, but this not executed.)

Tenn., Winchester.—Postoffice.—Treasury Dept., Oscar Wenderoth, Supervising Archt., Washington, D. C., let contract at \$45,219 to Algernon Blair, Montgomery, Ala., to erect postoffice; 2 stories and basement; 3800 sq. ft. ground area; semi-fireproof; stone and brick facing. (Lately noted.)

Tex., Austin.—Hospital.—State let contract to Fischer & Lambie, Austin, at \$30,155, to erect ward building at State Lunatic Asylum; contract for heating, plumbing and wiring let to John L. Martin, Austin, at \$7015. (Lately noted.)

Tex., Carlsbad.—Sanitarium.—Comms. State Tuberculosis Sanitarium let contract to Kuhlman & Blue, 502 Flatiron Bldg., Fort Worth, Tex., to erect buildings for sanitarium; power-house, 32x63 ft., 1 story; library and auditorium, 32x50 ft., 1 story; dormitory, 30x50 ft., 2 stories; dam 67 ft. long and reservoir 50 ft. in diam.; reinforced concrete buildings; tar paper, tar and gravel roof; steam heat; electric lighting; cost (without mechanical equipment) \$23,200; Ernest E. McAnelly, Archt., 1201 Southwestern Life Bldg., Dallas, Tex.; heating and lighting contracts not let; equipment purchased; structural steel contract let to Mosher Mfg. Co., Dallas; reinforced steel, Trussed Concrete Steel Co., Youngstown, O.; mill work, Enoch Lumber Co., Jackson, Miss. (Lately noted.)

W. Va., Moundsville.—Postoffice.—Treasury Dept., Oscar Wenderoth, Supervising Archt., Washington, D. C., let contract at \$39,850 to W. H. Batson, Moundsville, to erect postoffice; 2 stories and basement; 4800 sq. ft. ground area; front 82 ft. 8 in. by 31 ft. 6 in.; rear 37 ft. by 51 ft. 8 in.; fireproof except roof; composition roofing; steam heat to cost \$3000; electric lighting. (Lately noted.)

HOTELS

Ala., Birmingham.—W. D. Wood is reported to have let contract to Carrigan-Lynn Construction Co., Birmingham, to erect hotel at 4th Ave. and 23d St.; 4 stories; 50x100 ft.; fireproof; reinforced concrete; cost \$60,000; D. O. Whildin, Archt., Birmingham. (Lately noted to have let contract to Herndon-Hettrick Engineering Co., 1502 Empire Bldg., Birmingham, for reinforced concrete structural work.)

Ark., Hot Springs.—Como Security Co., E. H. Johnson, Prest. (lately noted inceptd., \$300,000 capital), will expend \$90,000 to erect hotel and banking room; 137x55 ft.; 6 stories; fireproof, reinforced concrete construction; Otis elevator; contract for heating let to American Radiator Co.; general contract (lately noted) let to Jones & Harrington, Fort Smith, Ark.; R. P. Morrison, Archt., Little Rock.

Ga., Columbus.—Columbus Georgia Hotel Co. will issue \$35,000 preferred stock to com-

plete Ralston Hotel, erect additional story and roof garden; Southern Ferro-Concrete Co., general contractor, 340 Trust Company of Georgia Bldg., Atlanta, Ga.; Ludlow & Peabody, Archts., 12 W. 31st St., New York. (Subcontractors lately noted.)

Ky., Lexington.—Combs Lumber Co., Lexington, general contractor to erect 6-story addition to Phoenix Hotel, let contract for cement work to J. P. Shine, Cincinnati; plans by Richards, McCarty & Bulford, Hartman Bldg., Columbus, O., call for structure 48x90 ft.; fireproof; steel columns, beams and concrete slabs, etc.; ornamental cast-iron marquee at main entrance extending out about 20 ft., etc. (Lately noted.)

N. C., Southern Pines.—Highland Park Hotel Co., W. C. Mudgett, Prest., let contract to Capps-Griffith Plumbing Co., Wilmington, N. C., at \$1150 for heating and plumbing in 3-story 48x60-ft. addition to Highland Pines Inn; general contract (lately noted) let to J. J. Stroud, Southern Pines, N. C. (See Machinery Wanted.)

MISCELLANEOUS

Ala., Ashford.—Fair.—W. H. Herrington has contract to erect three frame fair buildings, including grandstand with seating capacity of 2000.

Ala., Tuscaloosa.—Clubhouse.—S. A. E. Club let contract to C. M. Ayres, Tuscaloosa, to erect annex to clubhouse; dormitories and study-rooms; cost \$7500.

Md., Baltimore.—Restaurant.—Childs Dining Hall Co., New York, is reported to have let contract to N. D. Lewis Co., New York, to improve restaurant building at Charles and Fayette Sts.; cost \$10,000; J. C. Westervelt, Archt., 200 Fifth Ave., New York.

Mo., Kansas City.—Restaurant.—John Moore let contract to W. D. Lewis Co., New York, to erect restaurant for Childs Dining Hall Co.; 2 stories and basement; steel construction; exterior of white terra-cotta and plate glass; interior of tile and marble; cost \$70,000.

Mo., St. Louis.—Funeral Parlors.—Rosa Berger let contract to Matthews & Co., St. Louis, to erect funeral parlors at 4517 McPherson St.; 2 stories; cost \$6500.

N. C., Winston-Salem.—Clubhouse.—Forsyth Country Club let contract to A. H. Wallis, Winston-Salem, to erect clubhouse; W. C. Northrup, Archt., Winston-Salem. (Previously noted.)

RAILWAY STATIONS, SHEDS, ETC.

S. C., Kershaw.—Southern Ry. Co., B. Herman, Ch. Engr., Washington, D. C., is reported to have let contract to Porter & Boyd, Charleston, S. C., to erect passenger station.

Tenn., Clinton.—Southern Railway Co., B. Herman, Ch. Engr., 1300 Pennsylvania Ave. N. W., Washington, is reported to have let contract to H. F. Elliott, Hickory, N. C., to erect station; 1 story; brick; 70x38 ft.; 18 ft. high; concrete walk around building; contract for brick let to Oliver Springs Brick Co.; cost \$15,000. (Lately noted.)

SCHOOLS

Ark., Foreman.—City let contract at \$25,680 to T. T. Riddick, Fort Smith, Ark., to erect school; Frank M. Blaisdell, Archt., Little Rock.

Ark., Paragould.—School Dist. let contract to J. E. Hollingsworth & Co., Memphis, Tenn., to erect building; 68x70 ft.; mill construction; metal shingle roof; cost \$14,000; J. E. Shane, Archt., Paragould. (Lately reported.)

Fla., Orlando.—City let contract to Elchberger Heating Co., Atlanta, for heating school under construction, and to H. and W. B. Drew, Jacksonville, Fla., for seating; Cahow & Parker, Gen. Contrs., Tampa; ordinary construction; composition roof; Henry Green, Supervising Archt. (Previously noted.)

Fla., Plant City.—G. R. Durand let contract to R. E. Fletcher to erect building; 22x70 ft.; 1 story; foundation for additional story; brick.

Fla., Plant City.—Board of Public Instruction let contract to Dudley & Carlton, Plant City, to erect school; brick; Barrett's tar and gravel roof; hot-air furnace to cost \$2575; W. R. Biggers, Archt., Tampa; contract for heating, roofing and ventilating let at \$4420 to Tampa Roofing Co., Tampa. (Lately noted.)

Fla., Tampa.—English Classical School let contract to Clayton & Dean, Tampa, to erect gymnasium.

Fla., Wauchula.—City has plans by J. B. Long, Wauchula, for school; 2 stories; ordinary construction; brick; metal shingle

roof; cost \$13,000; Marshall & Sanders, Contrs., Lakeland, Fla.

Ga., Atlanta.—A. K. Hawk, 15 Mitchell St., let contract to C. Shelverton, Atlanta, to erect store; cost \$5000.

Ga., Macon.—Society for African Missions, Rev. J. Lessner, Prest., let contract to W. H. DeHaven, Macon, to erect school and dwelling; former 42x73 ft., 2 stories; latter 2 stories, 35x50 ft.; brick; galvanized tin shingle roof; steam or vapor heat; electric lighting; cost (without mechanical equipment) \$11,365; Henry Urban, Savannah, Ga., Archt. for school; Subers Co. has plumbing contract; B. B. Van Houton, roofing; both of Macon. (Lately noted.)

Ky., Louisville.—Board of Education let contracts as follows for school improvements: Plumbing in Wheatley school, at \$1485, to H. W. Newman; boiler-house at Wheatley school, at \$258, Frey Planing Mill Co.; heating and ventilating Wheatley school, \$2229, H. Netherton & Co.; boilers Tingley school, at \$1042, A. J. Anderson & Co.; stairways and floors at Washington school, Second Ward, Normal, Pinzer, Kentucky St., 6th St., California, Twelfth Ward, Grayson St., Coleridge and Eastern colored schools; floors and windows Franklin school, treads and floors Special school, treads at Western colored school, all to Thomas & Whitton, Louisville, at total of \$29,558; J. Earl Henry, Archts., Louisville. (Lately noted.)

La., Baton Rouge.—Trustees of Southern University and A. and M. College let contract to J. D. Brown, Baton Rouge, at \$23,974 to erect school building; 71x115 ft.; ordinary construction; composition roof; low-pressure steam heat; Favrot & Livaudais, Archts., New Orleans. (Lately noted.)

N. C., Winston-Salem.—Board of Education let contract at \$23,280 to D. K. Cecil, Lexington, N. C., to erect school in West Salem, and at \$4259 to Crawford Mill Supply Co. for plumbing; brick; will also erect school on Woodland Ave.; 8 rooms; 2 stories; brick; 115x47 ft.; full basement; has plans for addition to Depot St. school; 4 rooms and auditorium; frame; domestic science and manual training equipment; 72x54 ft.; also 4-room brick addition to West End graded school; voted \$60,000 bonds for schools. (Previously noted.)

Okla., Checotah.—Thomas School Dist. let contract to erect school. Address Dist. School Comms.

S. C., Cedar Springs.—Trustees of State Institute for Deaf and Blind are reported to have let contract to L. A. Justice Construction Co. to erect primary building; 3 stories; W. A. Edwards, Archt., Atlanta. (Lately noted.)

S. C., Latta.—School Dist. let contract to J. W. Stout & Co., Sanford, N. C., to erect high school; 74x50 ft.; 4 classrooms, auditorium and dressing rooms; cost \$12,500; ordinary construction; tin roof; steam heat to cost \$1650; electric lighting; telephones in each room; clock system; Sayre & Baldwin, Archts., Raleigh, N. C. (Lately noted.)

S. C., Varnville.—Varnville Hardware & Supply Co. let contract to erect store, etc.; cost \$5500. (See Warehouses.)

Tenn., Caryville.—Campbell County Comms. let contract to J. C. Africa, Jellico, Tenn., to erect \$6000 high school. (Lately noted.)

Tenn., Clarksville.—Montgomery County School Board let contract to Bailey Johnson, Clarksville, to erect school buildings; one 24x48 ft., one 24x56 ft., and several smaller ones; cost of first two, \$1000 and \$1500, respectively; others to cost \$6000. (Lately noted.)

Tex., Brenham.—Blinn Memorial College let contract to H. L. Welber to remodel buildings for dormitories; cost \$3000 to \$4000. (Lately noted.)

Tex., Dallas.—Highland Park School Dist. Trustees let contract to Trinity Building Co., Dallas, to erect school for which \$35,000 bonds were voted; cost \$17,200. (Lately noted.)

Tex., Hempstead.—Hempstead Independent School Dist. let contract to Jas. Watterson, Austin, to erect school; cost \$18,000; C. H. Page & Bro., Archts., Austin and Houston. (Previously noted.)

Tex., Kirven.—School Board let contract to erect \$9000 high school; C. Batchelor, J. R. Luke and G. B. Everett, Trustees. (Lately noted.)

Tex., Mertens.—School Board let contract to J. C. Ray, Alba, Tex., to erect school; ordinary construction; tar and gravel roof; individual room heaters; electric lighting; cost \$10,000; C. H. Leinbach, Archt., 1105 Southwestern Bldg., Dallas. (Lately noted.)

Tex., Point.—School Board let contract to Shepherd Bros., Greenville, Tex., to erect

school; ordinary construction; tar and gravel roof; individual room heaters; electric lighting; cost \$10,000; C. H. Leinbach, Archt., Southwestern Bldg., Dallas. (Lately noted.)

Tex., Westminster.—School Board let contract to R. G. Holt, Anna, Tex., to erect school; ordinary construction; tar and gravel roof; individual room heaters; electric lighting; cost \$10,000; C. H. Leinbach, Archt., 1105 Southwestern Bldg., Dallas. (Lately noted.)

Va., Richmond.—Churchill G. Chamberlayne let contract to John T. Wilson, Richmond, to erect school and dormitory for boys at Westhampton near Richmond; frame; cost \$18,500; Nolan & Baskerville, Archts., Richmond. (Lately noted.)

W. Va., Follansbee.—Board of Education will expend \$22,000 to erect school; 64 ft. 8 in. by 84 ft. 8 in.; fireproof; composition built-up roof; hot-air heat (separate contract) to cost \$2200; gas and electric lighting, \$500; Willard Wells, Archt., Wellsburg; general contract (lately noted) let to A. S. Craig & Co., Follansbee, W. Va.; stone contract let to Cheeks & Leibfort; brick, Emery Jacobs, Wellsburg.

W. Va., Wheeling.—Board of Education let contract to J. W. Beliz & Sons, Wheeling, at \$87,400 to erect fireproof building to replace burned structure; to Wm. Hare's Sons Co., Wheeling, at \$385 for plumbing; Theodor Wagner, Construction Supt.; F. F. Faris, Archt., Wheeling. (Lately noted.)

STORES

Ala., Bessemer.—W. J. Long and others let contract to erect store and office building. (See Bank and Office.)

Ala., Birmingham.—James Toole let contract to O. D. Metlock, Birmingham, to erect store and dwelling at 1616 3d Ave. N.; 2 stories; brick; cost \$12,000.

Ala., Montgomery.—H. M. Hobbie estate has plans by Frederick Ausfeld, Beel Bldg., Montgomery, for building to be occupied by Dun Drug Co.; 55x125 ft.; 5 stories and basement; pressed-brick front, with stone trimmings; plate-glass windows; cost \$50,000; Hugger Bros., Contrs., Montgomery; to be completed by January, 1915. (Lately noted.)

Ala., Selma.—Mabry Security Co. let contract to Geo. C. Wright, Selma, to erect 5 stores; brick; rough texture brick; concrete floor; stone trimmings; plate-glass front; Barrett Specification roof; G. Frank Galliber, Archt., Bell Bldg., Montgomery. (Lately noted.)

Fla., Miami.—G. C. Frizzell let contract to St. John Construction Co., Miami and Palm Beach, Fla., to erect store and office building; 25x30 ft.; 2 stories; cost \$11,000; fireproof and concrete; stucco exterior; metal roof; electric lighting; H. H. Mundy, Archt., Miami; contract let to John B. Orr, Miami, for interior and exterior plain and ornamental plastering, tile and marble work. (Mr. Orr lately noted as general contractor.)

Fla., Titusville.—F. H. Black, Titusville, and E. L. Brady, Miami, Fla., let contract to J. E. Easterly, Titusville, to erect 2 store buildings; 25x60 ft. and 25x70 ft., respectively; brick; Carey's roof; electric lighting; cost \$2800 and \$3700, respectively; Geo. Pfeiffer, Archt., Miami; contract for cement and plastering let to C. L. Roberson.

Ga., Augusta.—Mrs. J. B. Morgan let contract to E. L. Crooks, Augusta, to erect store; 45x100 ft.; 3 stories; ordinary construction; cost \$12,000; metal roof; gas and electric lighting; 7x9-ft. elevator; G. Lloyd Preacher, Archt., Augusta. (Mr. Crooks lately noted having contract.)

Md., Baltimore.—Dietrich Bros., Pleasant and Davis Sts., Baltimore, have contract for 250 tons of steel for building to be erected at 214 N. Charles St., to be occupied by Schoen & Co., and for which Morrow Bros., Fidelity Bldg., Baltimore, have general contract; Baldwin & Pennington, Archts., Professional Bldg., Baltimore. (Lately noted.)

Md., Baltimore.—J. Wilson Leakin, Fidelity Bldg., has plans by and let contract to John J. Moylan, 117 E. Center St., Baltimore, to erect 2 stores at 408-10 N. Howard St.; 3 stories; brick; each about 20x120 ft.

Mo., St. Louis.—Catherine Investment Co. let contract to A. Winkel, St. Louis, to erect two 2-story tenements at 2345-47 Red Bud Ave. and 2-story store and dwelling at 2349-55 Red Bud Ave.; cost \$17,300.

Mo., St. Louis.—Skinner & Kennedy Stationery Co., 312 N. Broadway, is reported to have let contract to Pelligreen Construction Co., St. Louis, to erect building; 7 stories and basement; 50x100 ft.; brick; cost \$75,000.

Mo., St. Louis.—Jas. A. Cerutti let contract to F. G. Howard, St. Louis, to erect

2-story store and tenement-house at 5744 Easton St.; cost \$3800.

Mo., St. Louis.—Chas. G. Stoermer let contract to E. Liebling & Son, St. Louis, to erect two 2-story stores and flats at 6188-92 Delmar St.; cost \$7500.

Mo., St. Louis.—Mrs. J. A. Baner let contract to Mittendorf & Poehliert, St. Louis, to erect 2-story mercantile building at 2101 Franklin St.; cost \$12,500.

Mo., St. Louis.—S. Pfening let contract to J. Neff, St. Louis, to erect 1-story store at 8007-9-11 Tracey Rd.; cost \$3600.

Mo., St. Louis.—J. M. Wall let contract to Sam Meyer, St. Louis, to erect store and apartment building at Cote Brillante and Union Ave.; 2 stories; 50x70 ft.; lower floor for store; upper floor for two 6-room apartments; will erect 4-family apartment-house adjoining at completion of this structure; mottled gray brick fronts, trimmed with terra-cotta; total cost of improvements, \$25,000; Wm. Wedemeyer, Archt., St. Louis.

Mo., St. Louis.—S. Pfening let contract to F. Neff, St. Louis, to erect 1-story store at 8007-9-11 Tracey Rd.; cost \$3600.

N. C., Winston-Salem.—Wilton Browning let contract to Mr. Hufty to erect stores; brick.

S. C., Gray Court.—F. T. Curry will erect building; 32x60 ft.; plate-glass front; brick construction; lower floor for store; upper floor, offices; cost \$2250; contract let to F. Hodge, Laurens, S. C. (See Machinery Wanted.)

Tenn., Memphis.—J. S. and Ray Dunscomb let contract to J. W. Williamson, Memphis, to remodel building to be occupied by McConnell Furniture Co.; also erect addition, making structure 175x50 ft., and 2 additional stories; stone and brick; cost \$25,400; G. M. Shaw, Archt., Memphis. (Lately noted.)

Tex., Commerce.—W. A. O'Neal let contract to Stateler & Son, Commerce, to erect 2 brick business buildings on E. Main St.

Tex., Dallas.—Garden Theater Co. let contract to erect store and theater building. (See Theaters.)

Tex., Elkhart.—Fagan Parke is reported to have let contract to erect 2-story brick building to replace structure lately noted burned.

Tex., Elkhart.—Ivan Gammage is reported to have let contract to erect 1-story brick building to replace structure lately noted burned.

Va., Alexandria.—Benedict Wheatley let contract to erect store and apartment building. (See Apartment-houses.)

W. Va., Clarksburg.—C. E. Prunty let contract to erect store and office building lately noted. (See Bank and Office.)

W. Va., Wheeling.—Stone & Thomas let contract to H. W. Fair and J. R. Butts & Sons Co. to erect 2 additional stories and addition to building on Market St.; 8 stories and basement; 88x110 ft.; power plant for light, heat and passenger and freight elevators; vacuum cleaning system; cold-storage plant; heating and lighting contracts not let; cost about \$100,000. (Noted in April.)

THEATERS

Tenn., Chattanooga.—Lyric Company, Inc., is reported to have let contract to Ernest J. Henderson, Chattanooga, to remodel building at 719 Market St. for moving-picture theater; will install special ventilation system, etc.

Tex., Dallas.—Garden Theater Co. (R. J. Stennet, W. J. Brown and others) let contract to Hughes-O'Rourke Construction Co., Dallas, to erect theater to replace present structure on Elm St.; 2 and 3 stories; stores on either side of entrance; auditorium enclosed with fireproof walls; stage with sanitary concrete dressing-rooms; asbestos curtains and scenery; lobby and foyer of marble wainscoting and decorated in plastic relief; cost \$30,000; I. A. Walker, Archt., Dallas. (Lately noted.)

WAREHOUSES

D. C., Washington.—G. A. and M. C. Didden let contract to McKay & Morris, 1336 G St. N. W., Washington, to erect warehouse at 52 O St. N. W.; cost \$29,000; G. A. Didden & Son, Architects, Corcoran Bldg., Washington.

D. C., Washington.—W. M. Griffiths let contract to H. M. Lanford, Oxford Bldg., Washington, to erect garage and warehouse at 50 N St. and 53 New York Ave. N. E.; cost \$8500; J. Barrett, Archt.

N. C., Winston-Salem.—Barton Bros. let contract to Consolidated Engineering Co., 243 Calvert Bldg., Baltimore, Md., to erect tobacco warehouse; cost \$35,000.

S. C., Varnville.—Varnville Hardware & Supply Co. let contract to W. F. Doherty, Aiken, S. C., to erect warehouse and store to replace burned building; former 40x100 ft.; 2 stories; latter 50x100 ft.; 2 stories; tin roof; electric lighting; hand or hydraulic elevator in each building; cost \$7500 and \$8500, respectively; J. H. Sams, Columbia, S. C., Archt. (Lately noted.)

Tenn., Nashville.—W. W. Dillon let contract to erect warehouse. (Lately noted.)

RAILROAD CONSTRUCTION

RAILWAYS

Ala., Huntsville.—Nashville, Chattanooga & St. Louis Ry. is reported surveying for a new line between Guntersville and Huntsville, Ala., about 30 mi. Another statement is that the survey is from Guntersville to Hobbs Island, about 20 mi. Hunter McDonald, Nashville, Tenn., is chief engineer.

Ala., Montgomery.—Construction of a new railroad which will connect Montgomery with St. Andrews Bay, Fla., is projected by H. G. Fisk of New York and others of Montgomery under the name of the Bay City, Lynn Haven & Northern Ry., and it is to include the present Birmingham, Columbus & St. Andrews Bay Ry., 38 mi. long from Chipley to Southport, Fla., of which A. D. Campbell of Chipley is receiver. Construction immediately in contemplation is from Chipley to Hartford, Ala., about 28 mi. Address Montgomery Chamber of Commerce.

Ark., Eagle Mills.—Freco Valley R. R. Co. was chartered merely to take over line already built. There is not any new work contemplated. E. L. Hayward is Pres.; Edward Bower, V.-P. and Gen. Mgr.; M. J. Moore, Secy. and Treas., at Eagle Mills.

Ark., Hot Springs.—Concerning report that a railroad is proposed from Hot Springs to Mena, Ark., about 65 mi., Walter E. Womble of Womble, Ark., says proposed line is Missouri, Arkansas & Southwestern R. R., and that G. H. Thayer of Mena and others are interested. Line would be altogether 55 mi. via Womble, and would require two 1-span bridges over Caddo River and one 4-span bridge over Ouachita River. Route is through rough to rolling country, but mostly lies in almost level east and west valleys.

Ark., Mountain Home.—K. V. Loba of Yakima, Wash., is planning construction of a short line of railroad from a connection with the White River line of the St. Louis, Iron Mountain & Southern R. R. to a connection with the Frisco System. He will establish an office at Mountain Home, Ark.

D. C., Washington.—Southern Ry. Co. will immediately proceed to complete second track between Washington and Atlanta. There remains to be built 139½ mi. between Washington and Charlotte, and 215 mi. between Charlotte and Atlanta. W. H. Wells, Washington, D. C., is chief engineer of construction.

Fla., Live Oak.—The Florida Bankers' Syndicate of Pensacola, A. L. Glass, Pres., is reported behind a plan to build the long-proposed White Springs & Suwannee River R. R. from Live Oak to White Springs, 20 mi., and W. E. Quarterman is also said to be interested.

Fla., Pensacola.—Roy C. Megargel of New York, Pres. Gulf, Florida & Alabama Ry. Co., is quoted saying that contract will soon be let for Alabama River bridge on extension now in process of construction from Broughton to Pine Hill, Ala., 50 mi. G. A. Berry, Pensacola, Fla., is V.-P., Gen. Mgr. and Ch. Engr.

Fla., Tarpon Springs.—A movement is in progress to build an electric railway. J. R. Durrance may give information.

Ga., Bostwick.—The Greene County R. R. has completed its extension from Good Hope to Monroe, Ga., 7 mi.

Ga., Macon.—Petitioners for charter of the Macon Terminal Co., which proposes to build the new union station, are W. A. Winburn, A. R. Lawton, T. M. Cunningham, Jr., C. K. Lawrence and T. J. Johnson, all of Savannah, Ga.; H. W. Miller, Sanders McDaniel and E. E. Norris of Atlanta, Ga., and J. B. Munson and W. F. Buchanan of Macon, Ga. Terminal road will be about 1 mi. long, but with several lines of tracks. Capital stock \$100,000.

Ga., Meigs.—The Swift Lumber Co. of Meigs is reported contemplating construction of an extension of its 4 mi. railroad from Meigs to Moultrie, Ga., about 18 mi.

Ga., Washington.—Washington & Lincoln Ry. Co. has organized by electing directors thus: Pres., J. R. Dyson; Secy., H. W. Quinn; E. A. Barnett, M. P. Pope,

M. A. Pharr, F. H. Ficklen, I. T. Irvin, Jr., L. D. Faver, Garnett A. Green and James A. Benson; capital stock is \$100,000. Survey from Washington to Lincoln, Ga., about 20 mi., has been made, and the officers were instructed to begin grading immediately.

Ky., Harlan.—Wasloto & Black Mountain Ry. (Louisville & Nashville System) is considering a proposition that it build an extension of 16 mi. to coal fields. H. C. Williams, Louisville, Ky., is Ch. Engr. of Constr.

Miss., Yazoo City.—W. B. Saunders of Minneapolis is investigating before making survey for a railroad from Yazoo City to Carthage, Miss., about 62 mi., proposed by Walter C. Murphy, who has agreed with the Yazoo City Commercial Club to build the line.

Mo., St. Louis.—Terminal R. R. Asso. of St. Louis has been authorized to issue \$1,000,000 of 4 per cent. 40-year bonds for improvements. W. S. McChesney, Jr., is Pres.

Mo., St. Louis.—Chicago & Alton R. R. is authorized by the Missouri Public Service Com. to issue \$585,000 of 6 per cent. improvement bonds. H. T. Douglas, Jr., is Chief Engr. at Chicago, Ill.

N. C., Cliffside.—Cliffside R. R. Co. will build with its own forces the extension to Durham Shoals on Broad River, and will also fill in trestles and otherwise improve its line now operating between Cliffside and Ellenboro, N. C. Contract was not awarded to L. P. Mason, as previously reported, but he is employed to superintend construction.

N. C., Shelby.—Cleveland county has voted \$40,000 of railroad-aid bonds to secure an extension of the Piedmont & Northern electric line via Kings Mountain and Shelby; also \$40,000 for a railroad proposed from Shelby to Casar, N. C., 20 mi. W. S. Lee, Charlotte, N. C., is V.-P. of the Piedmont & Northern, and O. M. Mull, Shelby, N. C., and others are interested in the second proposition.

Okl., Oklahoma City.—J. W. Tipton and C. B. Hale are planning construction of a system of electric interurban railways to connect Oklahoma City, Shawnee, Sapulpa, Tulsa, Muskogee, Bartlesville, McAlester and other places. First line proposed is from Tulsa to Coweta, Broken Arrow and Wagoner to Muskogee, 52 mi. Address Tulsa or Oklahoma City.

S. C., Charleston.—Contract has been signed by the Holston Corporation and the city of Charleston by which the former will begin construction within 60 days from July 1 of the terminal of the Carolina, Clinchfield & Ohio Ry. on its Town Creek site at Charleston, right of way for the terminal railroad tracks being granted. M. W. Potter of New York, Pres. Clinchfield Ry., is also president of the Holston Corporation. Ward Crosby, Johnson City, Tenn., is chief engineer.

Tenn., Chattanooga.—The Queen & Crescent Route has bought 47 acres of land on the Harrison turnpike road, beginning at the Southern Railway crossing, and, it is understood, will build additional yards. Curtis Dougherty, Cincinnati, O., is Chief Engr. Another report says this may be a plan of the Southern Ry., of which W. H. Wells, Washington, D. C., is Chief Engr. of Constr.

Tenn., Erwin.—Gulf & Bay Ry. Co. has been chartered to build a line about 50 mi. long from Erwin to connect with the Southern Ry. near Hot Springs, N. C. About one-half will be in Tennessee and the other half in North Carolina. Incorporators are W. A. Roberts, J. F. Toney, R. M. Barry, I. R. Roberts, J. L. Tucker, I. R. Love, J. D. S. Ryburn and N. T. Tucker, all of Erwin, Tenn. Preliminary survey made and rights of way obtained. A. G. Betts, Pres. Madison County Ry., Stackhouse, N. C., is said to be interested.

Tenn., Lebanon.—Concerning report that the Nashville, Chattanooga & St. Louis Ry.

would extend Lebanon branch, the company says that it does not contemplate the building of any new lines at present.

Tenn., Nashville.—It is officially announced that the first train over the Louisville & Northern R. R., which is the Louisville & Nashville's new double-track line south from Nashville, will be run on July 15. Construction is being finished at the Brentwood cut. H. C. Williams, Louisville, Ky., is Ch. Engr. of Constr.

Tex., Alpine.—Kansas City, Mexico & Orient Ry. will build this summer its projected extension from Alpine to the Rio Grande, about 76 mi., crossing that river 6 mi. from Presidio. R. P. Parker, San Angelo, Tex., is Ch. Engr.

Tex., Asherton.—H. G. Pert, Kansas City, Mo., says that the report from Texas that the Organization Brokerage Co., of which he is a member, would build an extension of the Asherton & Gulf R. R. from Asherton to Eagle Pass, Tex., about 50 mi., is "unauthorized and premature."

Tex., Dallas.—A committee composed of residents of Dallas and Wichita Falls, Tex., has been appointed to promote the plan for an interurban electric railway to connect two cities by a line more than 100 miles long, also reaching Gainesville. J. A. Kemp of Wichita Falls is chairman, and among others the other members are Frank Kell and R. E. Huff of the same city, Wm. Doran, H. L. Seay and J. V. Hughes of Dallas.

Tex., Houston.—Ed. Kennedy of Houston is reported planning construction of an electric railway from Beaumont via Houston to Dallas, Tex., about 225 mi.

Tex., Kingsville.—Col. Uriah Lott is reported planning construction of a railroad from Kingsville to Corpus Christi, about 40 mi. Col. R. J. Kleberg of Corpus Christi is also said to be interested.

Tex., Lubbock.—Ownership of the Altus, Lubbock & Roswell Ry. Co. is transferred, says a report, by Ed. Kennedy of Houston to J. M. West, E. C. Noble and Carey Shaw of that city; O. L. Slayden and F. E. Wheeler of Lubbock, Tex. Grading is complete between Lubbock and Memphis, Tex., for an extension of 86 mi. Present line in operation is from Altus to Wellington, Tex., 60 mi.

Tex., Mexia.—Houston & Texas Central R. R. has bought 200 acres of land one mi. south of Mexia and is building 12 mi. of yard tracks; to be in use Sept. 1. W. G. Van Vleet is V.-P. and Gen. Mgr. at Houston, Tex.

W. Va., Cass.—The Greenbrier, Cheat & Elk River Ry. has completed grading to within 10 mi. of Webster Springs, and rails have been laid to Cowgars Mill. Construction is being continued. C. C. Ferguson is manager.

STREET RAILWAYS

Fla., Clearwater.—A mass-meeting has rejected the application for franchise for electric railway in which Chas. H. Evans, H. A. Murphy and Jas. H. Murphy were said to be interested.

Ky., Middletown.—Capital is reported subscribed for the electric railway proposed by Dr. W. Godfrey Hunter to connect Middletown and adjacent towns, 5½ mi.

Md., Baltimore.—United Railways Co. of Baltimore has been ordered by the Maryland Public Service Com. to extend its Belair Rd. line from Overlea to Neckar, 3 mi. Wm. A. House is Pres.

S. C., Rock Hill.—Carolina Traction Co. has been granted right of way by the City Council to build a line of street railway along Elm, Park and Crawford Sts.

Tenn., Nashville.—Nashville Traction Co., with G. B. Howard & Co., Engrs., has begun construction of its electric street railway, part of the track having been laid on 5th Ave. Walter O. Farmer is Pres.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery or supplies of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers Record has received during the week the following particulars as to machinery and supplies wanted.

"WANTS"

Aluminum Manufactures.—Victor Welskopf, 310 Villita St., San Antonio, Tex.—Correspondence with manufacturers of aluminum specialties, including plates, cups, toilet sets, etc., for delivery interior of Mexico.

Boiler.—City of Scotland Neck, N. C.—Bids until July 23 on 25 H. P. water-tube boiler erected. (See Electric Plant.)

Boilers.—Hart & Gardner, Nashville, Tenn.—Prices on boilers for school building, 191x160 ft., at Columbia, Tenn.

Boiler.—Henry H. Diehl, City Engr.'s office, Louisville, Ky.—Prices on gas boiler with 2400 ft. radiation.

Boilers.—Baltimore (Md.) Board of Awards.—Bids at office of Richard Gwinn, City Register, City Hall, until July 8 to furnish and install boilers at city jail; drawings and specifications on file at office of C. E. Stubbs, Inspector of Buildings.

Boiler Tube Ends.—Merry Steel Truck Co., Augusta, Ga.—New boiler tube ends or scraps, 3/4 in. O. D. by 15 in. long, or multiples of 15 in.

Bridge Construction.—Mayor and City Council, Lonaconing, Md.—Bids until July 10 to construct bridge over Georges Creek; plans and specifications on file with Wm. Harvey, City Engr.; bids to be made on blank forms furnished by Engr.; Olin Durst, City Clerk.

Bridge Construction.—J. W. Munson, Brazoria County Judge, Angleton, Tex.—Bids until July 13 to construct 3 steel and wood bridges at Bernafdo, Hinkle's Ferry and Churchill's Ferry; plans and specifications on file with County Clerk; bidders to visit bridge site and inform themselves of local conditions.

Bridge Construction.—H. C. Butler, Chron. Road Com., Sevierville, Tenn.—Bids until July 7 to construct 3 bridges—180-ft. span across West Fork, Pigeon River; 60-ft. span across East Fork, Pigeon River; 30-ft. span across Dimpin Creek; invites plans and bids on both steel and concrete structures.

Bridge Construction.—Pulaski County Commrs., Little Rock, Ark.—Bids until July 2 to furnish material and construct 30-ft. reinforced concrete highway bridge over Scott bayou near Scott; plans and specifications obtainable from C. G. Doyle, County Highway Engr., or examined in office of County Clerk, Courthouse, Little Rock.

Building Materials.—Col. F. P. McConnell, care of Manchester National Bank, Richmond, Va.—Prices on materials to erect 3-story, 45x155-ft. ordinary, fireproof or slow-burning construction building.

Building Materials.—Hart & Gardner, Nashville, Tenn.—Prices on building materials for school building at Columbia, Tenn.

Building Materials.—Southern Structural Steel Co., Birmingham, Ala.—Prices on press brick, rock-faced granite, cement and lime for jail at Moultrie, Ga.

Building Materials.—Ragland-Baxter-Morford Co., Nashville, Tenn.—Prices on Bedford stone, architectural terra-cotta, marble and tile work, plastering and steel vault doors for \$60,000 office building at Charleston, W. Va.

Building Materials.—J. J. Stroud, Southern Pines, N. C.—Prices on metal shingles, electrical material, birch veneered doors, iron-bound columns and cypress bevel siding for \$10,000 addition to Highland Pines Inn.

Buttons.—F. Kauffman, manufacturers' agent, 50 Park St., St. Kilda, Melbourne, Australia.—Samples and prices from manufacturers of buttons for men's clothing.

Cars.—West Virginia Coal Mining Co., T. R. Ragland, Mgr., Skelton, W. Va.—Prices on 35 one-ton (gross) mine cars.

Canning Machinery.—Robert Canning & Creamery Co., Geo. O. Voorhees, Pres., Box 331, Pensacola, Fla.—Prices on canning machinery, tools, etc., for plant; daily capacity 5000 to 6000 cans.

Conveying Machinery.—West Virginia Coal Mining Co., T. R. Ragland, Mgr., Skelton, W. Va.—Prices on conveyor; about 100 ft. center to center; for elevating coal 22 ft. above drift.

Conveyor.—Caruthersville Sand & Supply Co., S. Hays, Pres., Caruthersville, Mo.—Conveyor to convey coal, sand and gravel from barges to top of bank into bins.

Compress Supplies.—W. B. Cooper & Co., Wilmington, N. C.—Compress supplies, including buckles, twine, cotton trucks, hooks, sampling knives, patches, rivets, underwriters' fire hose and nozzle, spanners, floor broom brands, ink compound, tire riveter and tarpaulins, heavy new patches and bagging.

Creamery Machinery.—Roberts Canning & Creamery Co., Geo. O. Voorhees, Pres., Box 331, Pensacola, Fla.—Prices on creamery outfit complete, excepting boiler.

Culvert Construction.—H. L. Washburn, Harris County Auditor, Houston, Tex.—Bids until July 13 to construct culverts, including necessary grading, at Enid St., Brooksmith addition; plans and specifications obtainable from County Engrs.

Curbing, etc.—F. L. Holt, Secy. Com., 1115 W. Markham St., Little Rock, Ark.—

Bids until July 7 for excavating, draining, curbing, guttering, lowering sewers and other work on Rice St. from Markham to south line Capitol View addition; plans and specifications obtainable from F. L. Holt, 1115 W. Markham St., and E. C. Buchanan, Civil Engr., 1821 Rice St.

Cycle Cars.—C. J. Martens, Bowling Green, Va.—Addresses of manufacturers of cycle cars.

Dredging and Filling.—Comms., Port New Orleans, Ernest M. Loeb, Pres., New Orleans, La.—Bids until July 20 to dredge and fill in Mississippi River; provide site for cotton warehouses and terminal facilities; estimated amount filling, 2,000,000 cu. yds.; estimated amount clearing, 90 acres; deposit required, \$5000; payments monthly; bond for one-half amount of contract; plans and specifications on file at office Ford, Bacon & Davis, Engrs., 921 Canal St., New Orleans; they furnish full set plans, etc., for \$10 deposit.

Dredging Machinery.—Lakeport Land Co., 318 Long Bldg., Kansas City, Mo.—May want sand dredger; for delivery De Soto county, Fla.

Electrical Equipment.—Hart & Gardner, Nashville, Tenn.—Prices on electrical equipment for school at Columbia, Tenn.

Electrical Equipment.—Water and Light Dept., F. T. Patterson, City Clerk, Newbern, N. C.—Bids until July 7 on fol-

Electric Plant.—Mayor and Comms., Scotland Neck, N. C.—Bids at Mayor's office until July 23 for 400 H. P., 300 R. P. M. steam engine; 250 K. W. engine-type, 2300-volt alternator, with exciter and switchboard; 250 H. P. water-tube boiler, erected; will receive separate bids.

Electric Plants.—See Water-power Plant, Marble Falls, Tex.

Electric-light Plant.—City, C. W. Boyles, Mayor, Jackson, Ala.—Bids to construct electric-light plant and water-works costing \$12,000 to \$15,000.

Elevator.—Bank of Raleigh, Beckley, W. Va.—Prices on electric elevator for 3-story bank building.

Engines.—W. C. Mosely, 861 Magazine St., New Orleans, La.—Addresses of manufacturers of drop-over or detachable engines for skiffs; view to agency.

Engine.—City of Scotland Neck, N. C.—Bids until July 23 on 400 H. P., 300 R. P. M. steam engine. (See Electric Plant.)

Floor-Clean Machinery.—J. D. Van Hooser & Co., Cookeville, Tenn.—Data and prices on machinery for manufacturing floor-clean.

Farm Implements.—See Hay-handling Machinery.

Gasoline Engines.—See Engines.

Hay-handling Machinery.—Sydnor Pump & Well Co., 1310 E. Main St., Rich-

mond, Va.—Catalogues and prices from manufacturers of hay-stacking and hay-handling devices.

Heating Plant.—Southern Structural Steel Co., Birmingham, Ala.—Prices on heating plant for jail at Moultrie, Ga.

Heating Plant.—Col. F. P. McConnell, care of Manchester National Bank, Richmond, Va.—Prices on heating plant for 45x155-ft. 3-story building.

Heating and Plumbing.—Richard A. Menden, Archt., 303 Mechanics' Bldg., Petersburg, Va.—Bids for heating and plumbing of Hotel Jefferson; plans and specifications on file with architect.

Heating and Ventilating Plant.—F. H. Duchay, Supt. of Prisons, Dept. of Justice, Washington, D. C.—Bids until July 21 to furnish and install heating and ventilating apparatus, east main cell wing, U. S. Penitentiary, Leavenworth, Kan.; specifications, etc., on application.

Household Novelties.—See Metal Polishers, etc., Harrison & Atwood, Sydney, N. S. W.

Ice Plant.—Lakeport Land Co., 318 Long Bldg., Kansas City, Mo.—May want ice plant; for delivery De Soto county, Fla.

Ice Machinery.—L. C. Starks, Mayor, Hardin, Ky.—Catalogues and prices on ice plant; 4 to 6 tons capacity.

Incinerators (Garbage).—Comms., Clarksdale, Miss.—Bids, addressed to M. W. Purnell, City Clerk, until July 23 to build crematory or garbage incinerator; population about 6000; bidders to furnish plans and specifications.

Lathes, etc.—Navy Dept., Bureau of Sup-

plies and Accounts, T. J. Cowie, Paymaster-Gen., Washington, D. C.—Bids until July 14 to furnish at Naval Academy, Annapolis, supplies as follows: Schedule 6923, lathes; schedule 6946, brass and galvanized pipe, lamp cord, nickel-plated floor plates, compression bibbs, brass bushings, nipples and plugs, pipe vise, wrenches, hinges, screw eyes, bolts and nuts; blanks on application to navy pay office, Baltimore, Md., or to Bureau.

Levee Construction.—Mississippi River Com., J. B. Slattery, Major, Engrs., Vicksburg, Miss.—Bids until July 13 to construct about 7500 cu. yds. levee work. Information on application.

Machinery (Contractors).—Hart & Gardner, Nashville, Tenn.—Prices on contractors' machinery for school at Columbia, Tenn.

Machine Shop Equipment.—A. H. Johnson, 913 S. Garden St., Columbia, Tenn.—Prices on new or second-hand lathe and other equipment for machine shop and garage.

Metal Plates.—Baltimore (Md.) Board of Awards, Richard Gwinn, City Register, City Hall.—Bids until July 15 to furnish Dan. J. Loden, Collector of Water Rents and Licenses, with 40,600 stamped tin license plates, 22,000 German silver dog license tags and 7500 vander badges; specifications on application to Mr. Loden.

Metal Polishers, etc.—Harrison & Atwood, De Mestre Pl., office 308 George St., Sydney, N. S. W.—Interested in metal polishers, etc., for household use; view to representation.

Metal Scrap.—See Boiler Tube Ends.

Metal Screen Slides.—J. C. Dasher, Yellow Pine Variety Co., Valdosta, Ga.—Metal screen slides of galvanized iron (preferred) or other rustproof material; screen grooves are 5-16-in. wide and 1/2-in. deep. Send samples of slides and state price per 1000 lin. ft. lots.

Metal Shingles.—See Building Materials.

Milling Machines, etc.—Navy Dept., Bureau Supplies and Accounts, T. J. Cowie, Paymaster-Gen., Washington, D. C.—Bids until July 14 to furnish grinding and milling machines, schedule 6942; delivery Washington; for schedules apply to navy pay office nearest navy-yard.

Mixing Machine.—C. E. Lockhart, Brooksville, Fla.—Addresses of manufacturers of and dealers in machines for mixing sand and oil for construction of hard roads.

Oil Engine.—City of Batesville, Miss.—20-H. P. kerosene engine. (See Water-works.)

Paving.—City Council, Miami, Fla.—Bids at office of W. B. Moore, City Clerk, until July 2 to grade and pave 16th St. from Ave. J to Miami River with Miami rock; width, 34 ft.; also grade, curb and pave portion of 10th St. with Miami coralline rock; width, 31 ft.; plans, profiles, etc., on file with City Clerk.

Paving.—A. N. Sloan, Commr. Dept. Streets and Sewers, Chattanooga, Tenn.—Bids until July 6 to pave with asphaltic concrete, including combined cement curb and gutter and cement sidewalks, the roadways of Highland Park Ave. from 14th to Main St., Dist. No. 186; Willow St., Main St. to Chamberlain Ave., Dist. No. 145, and Willow St., Chamberlain Ave. to Carolina St., Dist. No. 17; specifications, with blank form for proposal, contract and bond, furnished on application.

Paving.—Comms. Public Works, D. B. McKay, Chrmn., Tampa, Fla.—Bids until July 7 to grade, curb and pave following streets: Morgan, Harrison to Lafayette St., width 26 ft., sq. yds. 5100, lin. ft. curb 3480; Jefferson, Lafayette to Water St., width 26 ft., sq. yds. 7550, lin. ft. curbing 5200; East, Twigg to Whiting St., width 26 ft., sq. yds. 4000, lin. ft. curbing 2740; Bell, Cumberland to Nebraska Ave., width 26 ft., sq. yds. 2300, lin. ft. curbing 2260; Brush, Madison to Whiting St., width 26 ft., sq. yds. 2350, lin. ft. curbing 1690; Carew, Water to Franklin St., width 26 ft., sq. yds. 1335, lin. ft. curbing 900; Harrison, Florida Ave. to Jefferson St., width 35 ft., sq. yds. 3560, lin. ft. curbing 3000; Madison, Jefferson St. to Maxwell Ave., width 26 ft., sq. yds. 3800, lin. ft. curbing 2600; Whiting, Franklin St. to Nebraska Ave., width 50 ft., sq. yds. 10,700, lin. ft. curbing 3800; all to be paved with vitrified brick laid on edge and curbed with granite curbing; specifications may be obtained from City Engr.

Posts.—Knoxville Automobile Club, T. E. Pyley, Pres., Knoxville, Tenn.—Prices on about 250 ml. posts to be set in concrete about 10 ft. above ground; at extreme end of posts, in half circle, will be placed the

FOR the benefit of business concerns, engineers, contractors, machinery manufacturers, dealers and others who find it profitable to follow up daily the industrial, commercial, railroad and financial development of the South and Southwest as published in this Construction Department,

We issue every Business Day in the Year THE DAILY BULLETIN

The construction news as published in the Daily Bulletin is invaluable to all business people who want to keep in daily touch with the organization of business enterprises of all kinds throughout the whole South. Unlimited possibilities for the creation of business, for securing contract work, for the sale of machinery and supplies of all kinds, for bond buyers and others, are to be found through a close following up of the news in the Daily Bulletin.

The Daily Bulletin is an exceptionally desirable advertising medium.

The subscription price is \$25.00 a year. Are you a subscriber to it, or an advertiser in it? If not, you are missing an opportunity for profitable business.

lowing: 35 H. P., 60-cycle, 3-phase, 2200-volt, 1200 R. P. M. electric motor without pulley or bed plate, fitted with flexible coupling; 133 4 ft. by 18 in. best quality boiler tubes, to be used in Atlas water tube boiler.

Electrical Equipment.—Navy Dept., Bureau Supplies and Accounts, T. J. Cowie, Paymaster-Gen., Washington, D. C.—Bids until July 14 to furnish radio sets, transformers and masts, schedule 6896; delivery Washington; for schedules apply to navy pay office nearest navy-yard.

Electric-light Equipment.—J. Fletcher Turner, Dadeville, Ala., R. 2.—Prices on dynamo, etc., for small electric-light installation; has 6 H. P. gasoline engine.

Electric-light Plant.—Gurley Light & Power Works, H. A. Smith, owner, Gurley, Ala.—Prices on steam engine, 40 H. P.; 60 K. W. generator, 60 cycles, not less than 2200 volts, D. C., to engine; tubular boiler, 50 H. P., front and stack; also oil engine, 50 H. P., with generator connected as above.

Electrical Machinery.—City of Hawkinsville, Ga., E. L. Wilson, Supt. Water and Light Plant.—75 K. V. A., 60-cycle, 2300-volt generator, direct-connected to Corliss engine.

Electrical Machinery.—West Virginia Coal Mining Co., T. R. Ragland, Mgr., Skelton, W. Va.—Prices on 100 K. W. motor generating set and two 40 H. P. induction motors; 2200 volts.

Electrical Machinery.—City of Scotland Neck, N. C.—Bids until July 23 on 250 K. W., engine-type, 2300-volt alternator, with exciter and switchboard. (See Electric Plant.)

words "Knox County," and underneath, "Compliments of Knoxville Automobile Club;" also place name of town and distance thereon on both ends of road; balance of posts to be used for advertisements.

Pump (Sand and Gravel).—Caruthersville Sand & Supply Co., S. Hays, Pres., Caruthersville, Mo.—Sand and gravel pump.

Pump.—See Water-works, Batesville, Miss.

Road Construction.—City Council, Shreveport, La.—Bids until July 14 to gravel Mansfield Rd., 18 ft. wide, from Greenwood Rd. to city limits; terms and specifications on file with City Engr.; L. H. Baker, Secy.-Treas.

Road Construction.—Limestone County Comms., Courthouse, Athens, Ala.—Bids until July 27 to grade, drain and surface with gravel portion of Decatur-Athens Rd., beginning at river; W. S. Keller, State Highway Engr., Montgomery.

Road Construction.—Nassau County Comms., J. W. Keen, Chrmn., Fernandina, Fla.—Bids until July 15 to complete unfinished portions of Fernandina-Jacksonville highway as follows: 77,040 ft. on Nassau River Causeway, 2085 ft. in vicinity of Hedges between Hedges and Yulee, 2254 ft. between Yulee and Lofton Creek and 2365 ft. between Yulee and Lofton Creek; plans and specifications on file in office of Circuit Court, Fernandina.

Road Construction.—Wetzel County Comms., S. Myers, Clerk, New Martinsville, W. Va.—Bids until July 13 to build and improve about 22 mi. dirt road in Grant Dist.; plans and specifications in offices of F. W. Parsons, County Road Engr., New Martinsville, and L. E. Lantz, Chrmn. Grant Dist. Road Comm., Jacksonburg, W. Va., and Clerk.

Road Construction.—Dade County Commissioners, Z. T. Merritt, Clerk, Miami, Fla.—Bids until July 7 to construct 1 mi. rock road; plans and specifications on file with Clerk.

Road Construction.—Maryland State Roads Com., O. E. Weller, Chrmn., 601 Garrett Bldg., Baltimore, Md.—Bids until July 14 to build 7 sections of State highway, about 26.62 mi., as follows: Allegany county, from Green Ridge to Washington county line, 7.58 mi. (resurfacing), and from near Cumberland to Nave's Farm Rd., 1.74 mi. (resurfacing); Anne Arundel county, from Birdsville to South River, 4.55 mi. (gravel); Frederick county, through Middletown, 1.36 mi. (macadam or concrete); St. Mary's county, from St. Mary's City to Ridge, 6.74 mi. (gravel surfacing); Talbot county, from Easton to Trappe, 3.50 mi. (macadam or concrete); specifications and plans furnished on application, \$1 for each contract.

Road Machinery.—See Mixing Machine.

Sawmill Machinery.—E. L. Kendall & Co., Huntsville, Ala.—Small sawmill, side edger, bolting, etc.; 42 in. circular saw, 52 teeth; two edger saws; cut-off saw.

Scales.—West Virginia Coal Mining Co., T. R. Ragland, Mgr., Skeiton, W. Va.—Prices on scales.

Sewer Construction.—Mayor and Commission Council, Baton Rouge, La.—Bids until Aug. 1 to furnish material and construct 36,000 lin. ft. vitrified pipe sewers from 6 to 12 in. diam., together with necessary flush tanks, manholes and other appurtenances; specifications, proposal forms, etc., may be obtained and plans seen at office of John J. Munding, City Engr., City Hall, after July 10; plans and profiles may be obtained after said date by depositing \$5.

Sewage Ejector.—Bond Trustees, Frank Richardson, Chrmn., Jacksonville, Fla.—Bids until July 6 to furnish f. o. b. Jacksonville: Sewage ejector, capacity 200 gals. per minute, for 10-ft. lift, together with necessary inlet, outlet, check, gate and operating valves; equipment include air tank about 4x8 ft., with pressure gauge, safety valve and drip cocks; motor-driven air compressor, 8x6 in., to run at speed of about 215 revolutions per minute, driven by geared 10 H. P., 3-phase, 60-cycle, 220-volt electric motor, speed not to exceed 1150 revolutions per minute; furnish with motor automatic switch for starting and stopping motor as sewage rises or falls in well; with bid must be print and full specifications; for information apply to R. N. Ellis, purchasing agent.

Steel.—Navy Dept., Bureau Supplies and Accounts, T. J. Cowie, Paymaster-Gen., Washington, D. C.—Bids until July 14 to furnish quantity of black and galvanized sheet steel at Charleston, S. C., schedule 6970; for schedule apply to navy pay office nearest navy yard.

Store Fronts.—F. T. Curry, Gray Court, S. C.—Prices on plate-glass fronts for 2

buildings; 20x60 ft. and 12x60 ft., respectively.

Tanks (Gasoline, Slot).—J. H. Pickard, Raleigh, N. C.—Addresses of manufacturers of slot gasoline tanks.

Tank (Oil).—See Water-works, Batesville, Miss.

Tank and Tower (Steel).—Jonesville Oil Mill, E. F. McWhirter, Pres., Jonesville, S. C.—Second-hand steel tank on steel tower; capacity 40,000 to 50,000 gals. water.

Terra-cotta (Architectural).—See Building Materials.

Tile.—Bank of Raleigh, Beckley, W. Va.—Prices on floor tile for 3-story 32x105-ft. building.

Vacuum Cleaner.—C. S. Starbuck, Box 123, Winston-Salem, N. C.—Prices on vacuum cleaner outfit for \$5400 dwelling.

Vault Doors.—Ragland-Baxter-Morford Co., Nashville, Tenn.—Prices on steel vault doors for \$60,000 office building at Charleston, W. Va.

Water-power Plant.—City of Marble Falls, Tex., R. E. Johnson, Mayor.—Correspondence relative to installation water-power, water-works and electric-light system, etc.

Water-works.—See Water-power Plant, Marble Falls, Tex.

Water-works.—V. H. Ward, Mayor, and Aldermen, Batesville, Miss.—Bids until July 7 for 20 H. P. kerosene engine; car-size oil tank; 120 G. P. M. triplex power pump; 2 deep well power heads, belted; 50 ft. shafting, pulleys and belting; specifications from Dabney Engineering Co., Porter Bldg., Memphis, Tenn.

Water-works Supplies.—Mayor and City Council, Killean, Tex.—Bids until July 13 for 1500 ft. 8-in., 550 ft. 6-in. and 8000 ft. 4-in. cast-iron pipe; four 8-in., nine 4-in. and one 6-in. gate valves; 20 fire hydrants; motor-driven deep well pump; further information with M. Griffin O'Neill & Sons, Engrs., Practorian Bldg., Dallas, Tex.

Water-works.—Temple Smith, Secy., Greensboro, Md.—Bids until July 9 to construct water-works; cost \$20,000; erect 17x30-ft. brick, asbestos-shingle roof building; install 2 triplex pumps; 2 oil or gas engines; 50,000-gal. tank and 107-ft. tower; plans and specifications obtained by forwarding \$3 to Hugh T. Downing, Engr., Dover, Del.

Water-works.—Office of U. S. Shelley, Mayor, Daytona Beach, Fla.—Bids until July 11 to construct water-works system; two 25 or 40 H. P. oil engines, direct-connected to two 500 G. P. M., double-acting, triplex pumps; 50,000-gal. steel tank on 85-ft. tower, with riser pipe, expansion joint, balcony, ladder, etc.; 1600 ft. 8-in., 500 ft. 10-in., 8910 ft. 6-in. and 3885 ft. 4-in. cast-iron, class B, pipe; 7075 ft. 2-in. and 2600 ft. 1½-in. galvanized pipe with fittings; special castings; 23 double fire hydrants; one 10-in., seven 6-in., five 4-in., two 2-in. and five 1½-in. gate valves and boxes; quantities approximate; plans and specifications offices of Harry A. Horn, Clerk, or of Engr. J. B. McCrary Co., 1408 Third National Bank Bldg., Atlanta, Ga.

Water-works Equipment.—San Antonio Water Supply Co., San Antonio, Tex.—Bids until Aug. 3 to furnish two 5,000,000-gal. pumps and steam turbines, condensers and accessories; three 250 H. P. boilers and accessories; specifications on application to Robt. J. Harding, Ch. Engr.

Water-works and Electric-light Plant.—City, C. W. Boyles, Mayor, Jackson, Ala.—Bids to construct water-works and electric-light plant costing \$12,000 to \$15,000.

Well-drilling Equipment.—Kaufman County Oil & Gas Co., A. S. Guillot, Secy., 307 Gaston Bldg., Dallas, Tex.—Prices on rotary rig, casing, etc., for drilling oil wells.

Woodworking Machinery.—Hardwood Top & Panel Co., W. A. Dougherty, V.-P., Morristown, Tenn.—Prices on full line machinery to manufacture solid and veneer table tops from hardwood and panels and tops for all kinds of furniture.

ized with \$10,000 capital; C. C. Appleton and others, incorporators.

Ala., Geneva.—Bank of Geneva is being organized.

Ala., Sawyerville.—First National Bank has made application to organize; capital \$25,000. W. G. Lunsford, W. G. Lunsford, Jr., N. L. Lunsford, R. B. Lewis and E. S. Jack, directors.

Ala., Tuskegee.—Farmers' State Bank is being organized with \$30,000 capital. Among the stockholders are L. W. Johnston, B. C. Gibson, L. C. Johnston, Francis L. Wadsworth, Wm. Varner, M. B. Abercrombie, R. M. Boyd and W. P. Dowling.

Ark., Fort Smith.—City National Bank is approved; capital \$100,000. Organizers: J. H. Nadkimen, St. Cloud Cooper, R. Ney, B. Cravens and W. E. Rowsey.

Ark., Hot Springs.—Como Security Co. chartered and incorporated. Capital \$300,000. Directors: Ed. H. Johnson, Pres.; H. P. Collins, V.-P.; Chas. R. Birnbaum, Secy.; E. N. Roth, Treas.; M. C. Tomblar, Wm. M. Housley, Al. A. Reynolds, Chas. C. Sparks and J. B. Foote. Business is to begin Jan. 1, 1915.

Fla., Ellenton.—Ellenton State Bank has made application for charter; capital \$15,000. E. W. Stapleton of Zephyrville is president.

Fla., Tampa.—First Savings & Trust Co. is chartered; capital \$500,000; organizers, H. L. Knight, I. S. Craft, M. W. Carruth, A. C. Clewis, Peter O. Knight, L. L. Spafford, R. M. Clewis, H. J. Watrous, C. H. Clewis, W. I. Webb, Benjamin Cosio, J. A. M. Gracie, Ernest Kreher, John B. Moody and Karl E. Whitaker.

Ky., Louisville.—Audubon Building and Savings Assn., capital \$100,000, is inceptd. by Edward A. Scheffel, Fred J. Klotter, Frank S. Gernert, C. R. Dinwiddie and Clarence Gernert.

Ky., Wayland.—The Wayland National Bank, capital \$50,000, expects to begin business about July 1 with John E. Buckingham of Paintsville as president.

Ky., West Point.—West Point Bank is organized with \$15,000 capital; Charles Delfo, Pres.; Henry Fredemann, V.-P.; W. H. Ralinger, Cash. Business is to begin July 6.

Md., Frederick.—State Commercial Bank, capital \$100,000, will begin business July 1. Casper E. Chine, Pres.; S. Cornelius Thomas and Dr. G. F. Smith, V.-Ps.; Richard S. J. Dutrow, Cash.; Hammond Cleary, Asst. Cash.

Miss., Collins.—Covington County Bank, capital \$15,000, is organized by A. G. Holcomb, H. C. Rutland and others.

Miss., Collins.—Covington County Bank, capital \$15,000, is organized by A. G. Holcomb, H. C. Rutland and others.

Miss., Enid.—Bank of Enid, capital \$10,000, is organized by J. C. Price, A. J. Little and others.

Miss., Greenwood.—New bank is to be organized by W. L. Craig.

Miss., Mathiston.—Merchants and Farmers' Guaranty Bank chartered; capital \$10,000; expects to begin business about July 15; J. L. Ricks and others, organizers.

Mo., Davis.—Davis State Bank is being organized.

Mo., Edgar Springs.—People's Bank is being organized with \$10,000 capital.

Mo., Orchard Farm.—A new bank capitalized at \$10,000 is being organized by F. A. Ordelheide and others.

Mo., Sugar Creek.—State Bank is being organized with \$10,000 capital.

N. C., Spray.—The Boulevard Bank & Trust Co. is organized with \$10,000 capital. Rev. P. H. Gwynn will be cashier.

Okla., Drumright.—First National Bank, capital \$25,000, has made application to organize; organizers, N. Holman, Guthrie, Okla.; P. A. Norris, A. G. Adams, W. M. Robertson and G. Tipton.

Okla., Drumright.—American National Bank has made application to organize; capital \$25,000; organizers, Richard Steinhart, Bristow, Okla., W. E. Brown, L. B. Jackson, H. H. Johnson and S. L. Canterbury.

Okla., Enid.—Aetna Loan & Mortgage Co. is chartered; capital \$5000; organizers, A. H. Foulkes, W. E. Stoner and L. F. Messman.

S. C., Sumter.—Commercial Building and Loan Association is chartered; capital \$1,000,000; officers, W. F. Robertson, Pres.; J. K. Crowsell and R. A. Burgess, V.-Ps.; R. A. Bradham, Secy. and Treas. Business began May 1.

S. C., Woodruff.—People's Bank has made application to convert into the First National Bank; capital \$50,000.

Tenn., Erwin.—Erwin National Bank, to succeed the Bank of Erwin, is chartered. Capital \$25,000; surplus \$2500. N. T. Tucker, Pres.; L. H. Phetteplace, V.-P.; J. W. Allison, Cash.; Herman Erwin, Asst. Cash. Business is to begin about July 1.

Tenn., Newbern.—People's State Bank is chartered; capital \$25,000. Business is expected to begin soon.

Tenn., Centerville.—People's Bank, capital \$10,000, is inceptd. by Tom Tatum, W. H. Bizwell, Sam Anderson, M. E. Mayberry and J. W. Shouse.

Tenn., Cumberland City.—Citizens' Bank & Trust Co. is organized and will soon begin business with Francis Crockeal as cashier.

Tenn., Pulaski.—Citizens' Bank is being organized with from \$25,000 to \$50,000 capital. A. L. Worrell, Pres.; J. Walter Weld, Cash.

Tex., Matador.—Farmers & Merchants' Bank is being organized.

Tex., Pharr.—Pharr Investment Co. is chartered; capital \$5000; incorporators, Houston Jones, S. R. Cawthrop and J. A. Cook.

Tex., Winfield.—Winfield Loan and Building Assn. chartered; capital \$100,000; G. D. Nelson, Pres.; O. W. Candle, V.-P.; J. W. Barrett, Cash. Business is to begin July 1.

Va., Alexandria.—Union Savings Bank, inceptd., capital \$10,000 to \$25,000. Directors: Dr. E. A. Gorman, Pres.; W. H. Colvin, V.-P.; F. L. Slaymaker, Secy.; E. A. Garlock and Wm. Desmond. Business is to begin about Aug. 1.

Va., Lynchburg.—Mutual Building and Loan Association is being organized by John Victor, D. M. Penick, Martin L. Brown, H. M. Sackett, G. E. Vaughan, Peyton B. Winfree, W. J. D. Bell, E. P. Miller, Ernest Williams, D. B. Ryland, Allen Cucullu, L. H. McWane and others.

Va., Newmarket.—First National Bank of Newmarket is chartered; capital \$25,000. W. P. Crickenberger, Pres.; H. R. Stewart, Cash.

W. Va., Beckley.—The conversion of the Winding Gulf Bank into the Beckley National Bank, is approved; capital \$50,000.

NEW SECURITIES

Ala., Auburn.—\$10,000 high-school bonds are voted. B. B. Ross, Chrmn. High School.

Ark., Ashdown.—\$40,000 6 per cent. 10-25-year Orton Levee Dist. bonds have been purchased by James Gould of Pine Bluff.

Ala., Cullman.—\$20,000 6 per cent. 30-year light and water-works bonds are voted. Address The Mayor.

Ala., Florence.—Election ordered for July 26 has been called off. N. P. Morrison is Mayor.

Ala., Fort Payne.—Bids are being received by H. B. Brock, Mayor, for \$10,000 5 per cent. 20-year school-building bonds. Denomination \$100.

Ark., Star City.—Bids received until 3 P. M. June 30 by M. O. Adams, Chrmn. Board of Directors, for \$1500 6 per cent. 20-year bonds Road Improvement Dist. No. 2.

Fla., Apopka.—Election is to be held July 18 to vote on \$13,000 electric-light and city hall bonds. Address The Mayor.

Fla., Bartow.—\$15,000 school-building bonds Special Tax School Dist. No. 13, Polk county, are voted. Address County Comms.

Fla., Bartow.—\$15,000 5 per cent. 20-year bonds Special Tax School Dist. No. 13, Polk county, are voted. C. A. Parker is Supt. Public Instruction.

Fla., Bradentown.—Bids will be opened July 17 for the following 5 per cent. 20-30-year bonds: \$30,000 water-works, \$10,000 storm sewer, \$5000 fire department and \$15,000 funding floating debt; denomination \$500. Wm. Kean is City Clerk.

Fla., Clearwater.—Election will probably be held to vote on bonds for municipal improvements. Howell Brooke is Mayor.

Fla., Dade City.—\$20,000 water-works and \$5000 sewer and septic tank bonds are voted. Address The Mayor.

Fla., Daytona Beach.—\$22,500 5 per cent. 20-year water bonds are being offered; denomination \$5000; dated July 1, 1914; maturity 1934. Address Chas. H. Willson, Chrmn. Finance Committee.

Fla., Jacksonville.—Election is to be held Aug. 4 to vote on \$2,000,000 5 per cent. 30-year Duval county road bonds. J. H. Patterson is Chrmn. Board of County Comms.

Fla., Largo.—Election is to be held to vote on \$40,000 street, water-works and sewer bonds. Address The Mayor.

[For Additional Financial News, See Pages 84 and 85.]

FINANCIAL NEWS

FINANCIAL CORPORATIONS

Ala., Birmingham.—Geo. A. Neal writes that there is nothing to the report that he is organizing a savings bank, at least for some time to come.

Ala., Birmingham.—Birmingham Loan Co. is inceptd.; capital \$5000. Corinne Rich, Pres.; Joseph Rich, V.-P.; M. Bradman, Secy. and Treas., and A. P. Rich, Gen. Mgr.

Ala., Center.—A new State bank is organ-

Merchants-Mechanics National Bank

South and Water Sts. BALTIMORE MD
DOUGLAS H. THOMAS President.
JNO. B. RAMSAY V.-P. and Chm. Bd. of Dir.
WM. INGLE Vice-President.
JOHN B. H. DUNN Cashier.
 Capital \$2,000,000 Deposits \$21,670,000
 Surplus and Profits \$2,175,000
 Accounts of Banks, Bankers, Corporations and Individuals solicited.
 We invite correspondence.

Edwin Warfield, President

Fidelity and Deposit Company of Maryland

Home Office: Baltimore

Total Assets over \$11,000,000.00

All Kinds and Classes of Surety Bonds and Casualty Insurance

Largest and Strongest Surety and Casualty Company in the World

Delaware Trust Company

Wilmington, Delaware

INCORPORATING under broad, liberal, safe and stable Delaware laws. A fully equipped department for proper organization and registration of corporations. BANKING AND TRUST department gives special attention to out of town customers' accounts.

TITLE DEPARTMENT examines and guarantees title to realty throughout Delaware.
 REALTY DEPARTMENT has sites for manufacturing industries. Modern Methods of management of property.

J. ERNEST SMITH, President and Gen. Counsel.
WM. G. TAYLOR, Vice-Pres. and Treasurer.
HARRY W. DAVIS, Vice-Pres. and Secretary.
W. W. PUSEY, 2nd, Title and Real Estate Officer.

Southern Steam Railroad Securities

DEALT IN

F. J. LISMAN & CO.

Specialists in Steam R. R. Securities
 Members New York & Chicago Stock Exchanges
 30 Broad Street NEW YORK
 Stock Exchange Building, Philadelphia
 108 So. La Salle Street, Chicago
 18 Asylum Street, Hartford

INVESTMENT SECURITIES

Southern Stocks and Bonds
 Municipal and Corporation
 Cotton Mill Stock a Specialty

WM. S. GLENN, Broker, SPARTANBURG, S. C.

JOHN NUVEEN & CO.

First National Bank Building
 CHICAGO

We purchase SCHOOL, COUNTY and MUNICIPAL BONDS. Southern Municipal Bonds a Specialty.
 Write us if you have bonds for sale.

R. J. BEAMAN

Certified Public Accountant

Audits, Investigations and Accounting Systems

Union Central Bldg. CINCINNATI, OHIO

For Interesting and Valuable Information about
PATENTS WANTED
 and bought by Manufacturers, send 6c. post. for large
 illustrated paper Visible Results and Time Book.
 R. E. & A. D. Lacey, Dept. 5, Wash'ton, D. C. Estab. 1869.

Your Best Investment

If you are interested in the South and Southwest and want to keep in touch with this fast growing section, read the Manufacturers Record every week.

\$4.00 a Year

Less Than 8c. a Week

The First National Bank

17 South St., Baltimore, Md.

Capital, - - - \$1,000,000
 Surplus and Net Profits, 450,000
 Deposits, - - - 8,500,000

Especially well equipped to handle the business of Southern Banks, Corporations, Individuals and Manufacturers. We cordially invite correspondence and interviews.

The National Exchange Bank OF BALTIMORE, MD.

Hopkins Place, German and Liberty Streets
 Capital, \$1,000,000

August 9th, 1913, Surplus and Profits, \$764,091.00

OFFICERS
WALDO NEWCOMER, President.
SUMMERFIELD BALDWIN, Vice-Pres.
R. VINTON LANSDALE, Cashier.
C. G. MORGAN, Asst. Cashier.

Accounts of Mercantile Firms, Corporations, Banks, Bankers and Individuals Invited.

FIRST NATIONAL BANK RICHMOND, VIRGINIA

Capital and Surplus, - - - \$3,000,000

JNO. B. PURCELL, President

JNO. M. MILLER, Jr., Vice-Pres.

W. M. ADDISON, Cashier

GO SOUTH!

FOR SALE Timber, Coal, Iron, Ranch and Other Properties
 Southern States, West Indies, Mexico
SOUTHERN STATES DEVELOPMENT CO.
 (Brokers) Geo. B. Edwards, Pres.
 Tribune Building NEW YORK, N. Y.
 Confidential Negotiations, Investigations, Settlements, Purchases of Property

WE BUY MUNICIPAL BONDS

FROM

Municipalities and Contractors

BREED, ELLIOTT & HARRISON,
 First Natl. Bank Bldg., CINCINNATI, OHIO

The First National Bank OF KEY WEST, FLA.

United States Depository and Disbursing Agent
 Capital and Undivided Profits - - - \$100,000
 Surplus and Undivided Profits - - - 40,000
 A general banking business transacted
 Special attention given to collections

RUSSELL G. RANKIN Public Accountant

Southern Building
 WASHINGTON, D. C.

REFERENCES: WASHINGTON BANKS

We Buy Bonds

City, County, School and Road, from Municipalities and Contractors

WRITE

THE PROVIDENT SAVINGS BANK & TRUST CO.

CINCINNATI OHIO

THE TILLOTSON & WOLCOTT CO.

CLEVELAND, OHIO

BUYERS OF COUNTY CITY SCHOOL AND BONDS DRAINAGE

Correspondence Solicited

Municipal Bonds Purchased

Correspondence invited from investors wishing to sell their holdings of seasoned marketable Municipal Bonds, and from municipal officials and contractors in connection with entire new issues.

N. W. HALSEY & CO.

49 Wall Street, New York

PHILADELPHIA

CHICAGO

SAN FRANCISCO

Federal Sales & Service Company

MUNSEY BUILDING

WASHINGTON, D. C.

Agents for Government Contractors

We solicit representation of manufacturers in connection with Government contracts on commission basis. Long and successful experience. References.

VIRGINIA POLYTECHNIC INSTITUTE

AND
 AGRICULTURAL AND MECHANICAL COLLEGE
 BLACKSBURG, VIRGINIA

Thirteen degree courses in Agriculture, Engineering and Applied Science. Two-year course in Agriculture and Farmers' Winter Courses.
 Apply to Registrar for Catalogue. J. D. EGGLESTON, President.

We Buy City, County School and Drainage BONDS

FROM MUNICIPALITIES OR CONTRACTORS

We are in position to pay HIGHEST PRICES. Write or wire us your offerings.

THE NEW FIRST NATIONAL BANK Assets, \$6,000,000 COLUMBUS, G.

CHARLES L. HEHL, C. P. A., President

JOHN KUCHLER, C. P. A., Vice-President

ERNEST E. WOODEN, C. P. A., Sec. and Treas.

BALTIMORE AUDIT COMPANY

901-903 Calvert Building

BALTIMORE, MD.

Capital for Southern Industries**Peabody, Houghteling & Co.**

(Established 1865)

10 So. La Salle Street

CHICAGO, ILLINOIS

To Manufacturers and Capitalists

Contemplating the Establishment of Industrial Enterprises

Attention is called to the exceptionally favorable location of

NEWPORT NEWS, VA.

on Hampton Roads, fifteen miles from the sea. Deep water, railway and sea transportation facilities unrivaled. Climate salubrious. Apply to

W. B. LIVEZEY, President

OLD DOMINION LAND COMPANY
 NEWPORT NEWS, VA.

ESTABLISHED 1884

State, City and Corporation Securities Purchased Direct or from Holders.

Temporary Loans Arranged on Such Collateral.

Deposits, Dec. 31, 1912, \$9,132,372.15 Increase, \$1,970,862.54
 Dec. 31, 1913, 11,103,234.69

WE PAY 3% INTEREST SUBJECT TO CHECK

Largest Capital and Surplus of any financial institution in Maryland or south of Washington, D. C.

MERCANTILE TRUST & DEPOSIT CO. OF BALTIMORE

A. H. S. POST, President

FRED G. BOYCE, Vice-President
JOHN McHENRY, Treasurer

WILTON SNOWDEN, Vice-President
J. R. WALKER, Treasurer

Fla., Manatee.—Bids will be received until 2 P. M. July 22 by C. J. Majory, Mayor, for \$25,000 water, \$25,000 sewer and \$40,000 paving 5 per cent. 20-30-year bonds voted May 20. Denomination \$500.

Fla., Miami.—Bids will be received until noon Aug. 4 for \$12,000 6 per cent. bonds of Special Tax School Dist. No. 13, Dade county; dated July 1, 1914; maturity \$1000 July 1, 1924 and \$1000 annually thereafter. R. E. Hall is Secy. County Board of Public Instruction.

Fla., Palmetto.—\$35,000 sewer, \$10,000 water-works and \$40,000 street-paving bonds have been sold to the J. B. McCrary Co. at par.

Fla., Pensacola.—All bids received June 15 for \$400,000 4½ per cent. 30-year dock and belt railroad bonds were rejected and new bids will be asked in 60 or 90 days; denomination \$1000. Address A. Greenbut, Mayor.

Fla., Seabreeze.—Question of issuing bonds for water-works is under consideration. Address The Mayor.

Fla., Zolfo.—\$350,000 Comms. Dist. No. 5, DeSoto county, road and bridge bonds are voted. Address County Comms., Arcadia.

Fla., St. Petersburg.—\$148,000 6 per cent. 5-20-year gas-plant bonds were purchased by John Nuyeen & Co., Chicago, at par and premium of \$4340.40. W. F. Devine is City Clerk.

Fla., Tampa.—Election is to be held July 2 to vote on \$5000 building bonds Wimauma School Dist., Hillsborough county. Marshall Moore is Secy. Board of School Trustees.

Fla., Tampa.—Bids will be received until 11 A. M. July 22 for \$225,000 5 per cent. bonds Tampa Special School Dist. No. 4; \$2000 6 per cent. bonds Special Tax School Dist. No. 58; \$3000 6 per cent. bonds Special Tax School Dist. No. 52; \$1500 6 per cent. bonds Special Tax School Dist. No. 7, Hillsborough county. Address Wm. Schneider, Chrmn. Board of Public Instruction, Hillsborough County.

Fla., Tampa.—Election is to be held July 21 to vote on \$60,000 school bonds Dist. No. 45, West Tampa. Marshall Moore is Secy. Board of School Trustees, Hillsborough county.

Fla., Tarpon Springs.—Bids will be received until noon July 31 for \$35,000 street paving, \$15,000 sewer, \$15,000 water-works, \$12,000 city hall and jail and \$3000 fire department 6 per cent. 10-35-year bonds. Address N. A. Van Winkle, J. R. West, Jr., and L. S. Fernald, bond trustees.

Ga., Americus.—\$7000 school and \$3000 hospital bonds voted June 17 are 30-year 5 per cent.; denomination \$500 to \$1000. Date for opening bids not yet decided. Address J. E. Poale.

Ga., Eatonton.—Election ordered for June 8 to vote on \$25,000 electric-light bonds was called off. M. S. Shivers is Chrmn. Special Com. of Light and Water Boards.

Ga., Brunswick.—The \$30,000 municipal-improvement bonds to be voted on July 22 are 30-year 5 per cent. J. Hunter Hopkins is Mayor.

Ga., Canton.—\$25,000 school, \$5000 water and light and \$5000 city hall bonds are voted. Howell Brooke is Mayor.

Ga., Guyton.—\$12,000 6 per cent. 30-year school bonds are voted. M. B. Porter is Secy and Treas. Guyton Local Tax School Dist., Effingham county.

Ga., Newington.—\$3000 5 per cent. 30-year school bonds were voted June 25; denomination \$100; maturity 1915-1945. Date for opening bids not yet decided. C. A. Woods, Secy. Board of Education.

Ga., Norcross.—Bids will be received until July 6 for \$4000 5 per cent. 5-20-year municipal-improvement bonds; denomination \$1000. O. O. Simpson, Mayor; D. B. Wall, City Clerk.

Ga., Norman Park.—\$6000 school bonds are voted. Address The Mayor.

Ga., Swainsboro.—Bill is pending in the Legislature authorizing bonds for water-works. C. H. Thompson is Mayor.

Ky., Anchorage.—\$25,000 5 per cent. water-works bonds have been purchased by Seagood & Mayer, Cincinnati, at par.

Ky., Dixon.—\$5000 Slaughterville School Dist., Webster county, bonds are voted. Address County Comms.

Ky., Somerset.—\$300,000 Pulaski county road bonds defeated.

La., Baton Rouge.—\$186,000 5 per cent. 27-year "series B" Road Dist. No. 2, East Baton Rouge parish bonds have been purchased by the Bank of Baton Rouge at \$211.50 premium. F. A. Woods is Secy.

La., Baton Rouge.—Bill is to be introduced in the Legislature providing for the issuing

of \$2,000,000 school bonds. Address Board of Education.

Md., Cambridge.—Bids will be received until 2 o'clock July 7 for \$30,000 Dorchester county road-improvement bonds. Isaac O. Taylor is Prest. Board of County Comms.

Md., Cumberland.—\$60,000 5 per cent. school bonds were purchased June 23 by the Citizens' National Bank, Frostburg, at 103.975; denomination \$100, \$500 and \$1000; dated June 1, 1914; maturity: \$5000 on June 1, 1916, and \$5000 annually until paid. Address County Comms., Angus Ireland, Clerk.

Md., Easton.—Bids will be received until noon July 8 by Joseph B. Seth, Mayor, for \$30,000 5 per cent. electric bonds; denomination \$1000; dated July 1, 1912; maturity 1946 to 1958, inclusive. Jas. B. Clark is Town Clerk.

Md., Kensington.—Bids will be received until 8 P. M. July 14 by C. R. Hughes, Clerk and Treas., for \$50,000 5 per cent. municipal bonds; denomination \$1000.

Md., Rockville.—Bids will be received until noon September 15 for \$7500 5 per cent. Montgomery county bonds; denomination \$500. Address Richard T. White, Jr., Prest. Board of County Comms., Berry E. Clark is Clerk.

Miss., Batesville.—\$15,000 6 per cent. 20-year municipal bonds are being offered. Address C. G. Talbutt. Further particulars will be found in the advertising columns.

Miss., Clarksdale.—\$50,000 5 per cent. 20-year paving bonds have been purchased at par by Bolger, Mosser & Williams of Chicago.

Miss., Collins.—Board of Supervisors, Covington County, has authorized an issue of \$15,000 agricultural high-school bonds.

Miss., Friar Point.—Bids will be received by S. L. Carr, Clerk Coahoma County, until noon July 6 for \$100,000 5 per cent. 30-year road and bridge bonds.

Miss., Noxapater.—Bids will be opened Aug. 4 for \$14,000 5 per cent. agricultural high school bonds; denomination \$700; dated Aug. 1, 1914; maturity, 5 bonds due Aug. 1, 1918, and one each year until 1934, when 4 bonds will mature. Address R. H. Barrett, Mayor. F. M. Glenn is Clerk Board of Aldermen.

Miss., Palmyra.—Election is to be held July 27 to vote on \$26,000 5 per cent. water and light-plant bonds; denomination \$500. Address City Clerk.

Miss., Ripley.—Board of Supervisors Tippah County proposes to issue \$500 bonds Mathis High School Dist. J. W. Street is Clerk.

Miss., Yazoo City.—Bids will be received until 8 P. M. July 13 by H. W. McCormick, City Clerk, for \$100,000 5 per cent. 20-year bonds. T. H. Campbell, Jr., is Mayor.

Mo., Brunswick.—\$12,000 paving bonds are voted. Address The Mayor.

Mo., Cape Girardeau.—\$4,750,000 Little River Drainage Dist. bonds were purchased by a syndicate of Chicago bankers. P. B. Oliver is attorney for Board of Dist. Supervisors.

Mo., Cassville.—Election is to be held to vote on \$9000 of water-works improvement bonds. Address The Mayor.

Mo., Kahoka.—\$4000 street-improvement and \$11,000 water-works and electric-light-extension 5 per cent. bonds recently voted have been sold; dated July 1, 1914; maturity serially 5th to 11th year. Address Board of Aldermen. H. W. Trump is City Clerk.

Mo., Moberly.—Board of Education is taking steps to issue bonds for school improvements.

Mo., North Kansas City.—Bids received until July 1 by M. H. Dagg, Clerk Board of Education, for \$5000 6 per cent. school district bonds.

Mo., Springfield.—\$50,000 Current Revenue bonds are to be placed on the market in July. Address City Treas.

N. C., Beaufort.—\$30,000 5 per cent. 30-year school bonds were purchased by A. J. Hood Banking & Trust Co., Detroit, at par, purchasers to pay all expenses.

N. C., Clinton.—Election to be held in Sampson county to vote on \$65,000 5 per cent. 20-year railroad aid bonds is to be held July 14. J. R. Peterson is Chrmn., Board of County Comms.

N. C., Durham.—\$60,000 4½ per cent. 15-year sewer bonds are to be issued. Address Board of Aldermen.

N. C., Greensboro.—The \$100,000 improvement bonds to be voted on July 21 are 30-year 5 per cent. T. J. Murphy is Mayor and J. S. Michaux, City Clerk.

N. C., Winston.—Bids will be received until July 15 by W. B. Coleman, City Clerk, for \$100,000 5 per cent. 30-year sewer and paving bonds voted June 23.

N. C., Murphy.—\$50,000 railroad aid bonds recently voted have been declared illegal, and no issue will be made. P. C. Hyatt is secretary.

N. C., Salisbury.—Bids will be received by Board of Drainage Comms., Grant's Creek Drainage Dist., Rowan county, until 10 A. M. July 14 for \$35,000 6 per cent. 13-year bonds. C. M. Miller, Ch. Engr. and Supt. Further particulars will be found in the advertising columns.

N. C., Southport.—Bids will be opened July 13 for \$15,000 Brunswick county road-building bonds voted June 6; maturity 1934. Address A. M. Chinnis.

Okl., Bartlesville.—Park bond issue has been postponed indefinitely. Election may be held in October or November. C. A. Sams, Mayor.

Okl., Mangum.—Election will probably be held to vote on light and ice-plant bonds. Address Mayor Border.

N. C., Winston-Salem.—\$250,000 funding, \$60,000 school, \$50,000 sewage-disposal plant, \$50,000 water-improvement, \$50,000 street-improvement 5 per cent. 30-year bonds are voted; \$250,000 electric-light-plant bonds were defeated. Address The Mayor.

Tenn., Galesboro.—\$75,000 6 per cent. 5-20-year bonds Drainage Dist. No. 1, Jackson county, were purchased at par by Oscar Moreland, Toledo.

Tenn., Henderson.—All bids received June 17 for \$55,000 6 per cent. 20-year Chester county drainage district bonds were rejected. J. F. O'Neal is Secy-Treas.

Tenn., Jonesboro.—\$15,000 street-improvement bonds voted. Address The Mayor.

Tenn., Lewisburg.—\$20,000 5 per cent. 30-year street and sewer bonds were awarded to the First Savings Bank & Trust Co., Nashville, at \$20,874.50; denomination \$500; dated July 1, 1914; maturity 1944. J. A. Loyd is Mayor.

Tenn., Oakwood, P. O. Knoxville.—\$30,000 street-improvement bonds are authorized by Town Comms.

Tenn., Ripley.—\$15,000 5 per cent. sidewalk and street improvement bonds are to be voted in July. Denomination \$500; maturity 1944, optional after 20 years. J. E. Pierson is Recorder.

Tenn., Savannah.—Election to vote on \$240,000 Hardin county pike bonds is to be held Aug. 6. L. L. Harburt is County Clerk.

Tenn., Savannah.—Hardin county has voted \$240,000 railroad-aid bonds. Address County Comms.

Tenn., Toone.—Bids will be received until noon July 15 for \$3000 6 per cent. 20-year school bonds. Denomination \$500. T. H. Ransom is Mayor.

Tex., Angleton.—\$60,000 5 per cent. 40-year Brazoria county bridge bonds voted Sept. 23, 1913, have been purchased at par and accrued interest by the Midland Bridge Co.; denomination \$1000; dated Oct. 10, 1913. J. W. Munson is County Judge.

Tex., Austin.—Attorney-General has approved following securities: \$1000 5 per cent. 5-20-year bonds Upshur County Common School Dist. No. 30; \$225 5 per cent. 1-5-year bonds Scurry County Common School Dist. No. 38; \$1500 5 per cent. 5-20-year bonds Walker County Common School Dist. No. 14; \$5000 5 per cent. 10-20-year bonds Rains County Common School Dist. No. 2; \$11,000 5 per cent. 20-30-year bonds Carson County Common School Dist. No. 7; \$5000 5 per cent. bonds Iola Independent School Dist., Grimes county; \$20,000 5 per cent. 25-40-year bonds Dimmit County Common School Dist. No. 3; \$400,000 5 per cent. 40-year bonds Navarre County Road Dist. No. 1; \$100,000 5 per cent. 20-40-year bonds Trinity County Road Dist. No. 2; \$175,000 wharf and dock bonds.

Tex., Bay City.—\$100,000 of bonds of Matagorda County Road Dist. No. 2 are reported sold. Address County Comms.

Tex., Bryan.—\$50,000 5½ per cent. 10-19-year Brazos county bridge warrants have been purchased by Commonwealth Trust Co., Houston; dated June 13, 1914.

Tex., Cameron.—Dist. No. 8, Milan county, has voted \$100,000 bonds. Address County Commissioners.

Tex., Calvert.—Bids will be received until 3 P. M. July 1 for \$5000 5 per cent. Calvert city and Firemen's Hall bonds; denomination \$500. J. W. Doremus, Jr., is Mayor and H. P. Johnson Secy.

Tex., Caldwell.—Snook Dist., Burleson county, has voted \$2000 school bonds. Address County Comms.

Tex., Cotulla.—\$40,000 La Salle county road bonds are voted. Address County Comms.

Tex., Cuero.—\$30,000 Cuero Drainage Dist., DeWitt county, bonds are voted. Address County Comms.

Tex., Dallas.—\$30,000 Highland Park Independent School Dist. bonds and \$16,000 West Dallas Independent School Dist. bonds have been purchased by the Citizens' State Bank & Trust Co., Dallas.

Tex., El Paso.—\$250,000 sewer and water bonds have been purchased by Splitzer-Rorick & Co., Toledo, at par, with accrued interest and premium. C. E. Kelly is Mayor.

Tex., Ennis.—\$197,500 bonds are voted for following purposes: \$80,000 school, \$35,000 street, \$17,500 city hall, \$30,000 sewer and \$35,000 water-works. W. D. Farris is Mayor.

Tex., Ferris.—Bids will be received until July 10 by L. D. Johnston, Mayor, for \$16,000 10-40-year sewer bonds.

Tex., Floresville.—\$60,000 Wilson county road bonds defeated.

Tex., Highland Park (P. O. Galveston).—\$30,000 School Dist. bonds are voted. Address Board of School Trustees.

Tex., Kaufman.—\$200,000 road bonds Justice Precinct No. 1, Kaufman county, defeated.

Tex., Kaufman.—\$7500 street bonds recently voted are 15-40-year 5 per cent. Address The Mayor.

Tex., Lockhart.—City will vote on \$5000 bridge improvement bonds. Address The Mayor.

Tex., Milford.—Bids are now being received by J. M. Goldston for \$10,000 water-works and \$4000 street-improvement 5 per cent. 20-40-year bonds. Denomination to suit purchaser; dated July 6, 1914.

Tex., Pecos.—Bids for \$100,000 5 per cent. 20-40-year bonds Road Dist. No. 1, Reeves county, will be opened on July 13. H. N. McKellar is County Judge.

Tex., Uvalde.—\$180,000 Uvalde county highway bonds defeated.

Tex., Waco.—Lacy Summit School Dist. No. 15 has voted \$6000 schoolhouse bonds. Address School Trustees.

Va., Ashland.—\$40,000 5 per cent. 10-50-year water and sewer bonds have been purchased by Frederick E. Nolting & Co. at par. Address The Mayor.

Va., Pulaski.—\$58,000 school bonds are voted. Address Board of Education.

Va., Newport News.—\$40,000 5 per cent. 10-year school bonds have been purchased at \$48.80 premium by New York Life Insurance Co.

Va., Norfolk.—Reports state that in a couple of months city will issue \$500,000 of bonds for various improvements, including \$200,000 in renewal (interest to be 4½ instead of 5 per cent.) of bonds maturing Oct. 1 next. Address The Mayor.

Va., Petersburg.—Steps are being taken to issue \$300,000 of bonds for public school buildings and armory. Robt. Cabaniss is Mayor.

Va., Portsmouth.—Bids received until 3 P. M. June 30 for \$5000 5 per cent. 20-year bonds Creek Magisterial Dist. No. 6, Norfolk county. Address Treas. of Norfolk county.

Va., Richmond.—A resolution is passed authorizing an issue of \$500,000 street-improvement bonds. Address The Mayor.

Va., Vinton.—\$25,000 water, street and sewer improvement bonds have been sold to a Cincinnati firm at par. Address The Mayor.

W. Va., Beckley.—\$180,000 5 per cent. 30-year town district, Raleigh county, road-improvement bonds defeated.

W. Va., Charleston.—\$465,000 5 per cent. 20-year improvement bonds have been purchased by E. R. Rollins & Co. and Seasongood, Mayer & Co. jointly at a premium of \$7812.

W. Va., Logan.—\$75,000 5 per cent. school bonds have been awarded the Fifth-Third National Bank, Cincinnati, at \$25 premium.

FINANCIAL NOTES

A report from Biloxi, Miss., says that the stockholders of the Harrison County Bank and the Peoples' Bank have decided to consolidate under the name of the latter.

J. H. Barr, V.-P., has been elected president of the First National Bank of Birmingham, to succeed W. P. G. Harding, who resigned to become a member of the National Reserve Bank Board, with headquarters at Washington.

The West Virginia Bankers' Association held its annual convention last week at Martinsburg and elected officers thus: Harry W. Chaddock of Grafton, Prest.; R. E. Talbott of Philippi, V.-P.; J. S. Hill of Charleston, Secy.-Treas.

The Deposit & People's Bank of Paris, Ky., is to be formed by the merger of the Deposit Bank and People's Bank. Combined they will have a capital of \$150,000 and surplus of \$80,000. Deposits will total \$550,000 and

loans \$670,000. Silas Bedford. It is reported, will be president and Clarence Thomas cashier.

The Ohio Valley Bank & Trust Co. and the Planters' State Bank at Henderson, Ky., have been consolidated, with headquarters in the building of the former. The combined capitalization is \$300,000 and surplus \$100,000. B. G. Witt is Pres.; James R. Barrett, Chrmn. of the Board; Montgomery Merritt, V.-P., and W. H. Stiles, Cash.

The Commercial-Germania Trust & Savings Bank of New Orleans is reported to have bought a controlling interest in the Commercial National Bank there. It is stated that they will continue separate and will have combined resources of more than \$19,000,000. John H. Fulton was elected president of the first-named institution, to succeed Wm. M. Smith.

Georgia Asbestos and Tale.

The Geological Department of Georgia has just issued a valuable report on the asbestos, tale and soapstone deposits of the State. This report, Bulletin No. 29, which was prepared by Dr. Oliver B. Hopkins, assistant State geologist, is a volume of nearly 400 pages, well illustrated with halftone cuts and maps.

The report is divided into three parts. The first part deals with the general geology of the crystalline area of Georgia, and describes in considerable detail the basic dike rocks, together with their alterations, especially in regard to the origin of asbestos, tale and soapstone.

The second part of the report deals with asbestos, one of the most unique of all minerals. Asbestos has been described as a "physical paradox, a mineralogical vegetable, a connecting link between the mineral and vegetable kingdoms in that it appears to possess some of the characteristics of both, while being different from either." Although it may yield fibers approaching silk in luster and fineness, and may be woven as wool, flax or silk, it is remarkable among nature's products in its resistance to both heat and acids.

There are two kinds of asbestos, namely, amphibole asbestos and serpentine or chrysotile asbestos. The former type is the most abundant in Georgia and has been extensively mined at Salt Mountain in White county for the past 20 years. The locality here referred to is one of the chief sources of domestic supply of asbestos in this county. The report not only describes all of the known deposits of asbestos in Georgia in detail, but it also describes briefly all of the deposits in North America. It, furthermore, includes descriptions of the different phases of the asbestos industry, including a comprehensive account of its occurrence, mining, milling, origin, production and uses.

The third part treats of the tale and soapstone deposits of Georgia in the same manner that the asbestos deposits are treated in the previous part.

The distinction between tale and soapstone is one of purity. Soapstone is impure tale. The difference in purity leads to a difference in the uses of the two materials. Tale is used largely for making pencils for tailors, metal workers and school use. Soapstone, on the other hand, is used largely in making table tops for chemical laboratories, sinks, griddles, etc.

The physical properties on which the use of tale and soapstone depends are their softness and consequent ease with which they may be worked into any desired form, stability in regard to heat and acids, low conductivity and high absorption of heat and electricity, and in some cases its whiteness, fibrous structure and unctuous qualities.

North Carolina and Georgia produce the entire output in the United States of high-grade tale for pencils and powder, material that sells up to as much as \$500 per ton when ready for the market.

Copies of the report here described may be obtained from S. W. McCallie, State

geologist, on payment of the postage, 21 cents.

Apiculture in the Bahamas.

"Honey to the value of \$5,000,000 could be made in the Bahamas yearly," is the statement of an American who, after successfully engaging in honey-extracting enterprises in Cuba as well as in Louisiana and Florida, has turned his attention to these islands—a new field for exploitation, says Consul W. F. Doty, Nassau, New Providence.

On the large island of Andros, in the Bahamas, the black mango abounds, which furnishes a most excellent material for honey making. There is a sufficient variety of flowers on all of the islands of this colony to warrant the people in entering intelligently and heartily into the honey industry. Cuba sends large quantities of Germany to be used in the spirit industry, and other West Indian islands have also prospered on a smaller scale from bee culture. Beeswax is a much-needed article in the United States and many other countries. At Nassau this article retails at 48 cents United States per pound, mixed with paraffin, received from New York. The bee culturist referred to has sold beeswax here profitably unmixed at 40 cents per pound, and has a standing offer for large quantities.

One hundred hives are sufficient, with a number varying between 60,000 and 120,000 in each hive, to make honey and wax that would most comfortably support a native family during a year. The value of the honey per hive is rated annually at \$8 and even \$10 here. The bees range over an area with a radius of four miles from the hive, so that land space is not an important consideration. Natives residing in small cities or villages are easily prepared to engage in this culture in a small yard. The Government of the Bahamas is considering the advisability of engaging this American apiculturist to instruct the natives for two or more years, teaching them the latest methods, so as to develop this industry on a large scale.

Bedford Pulp & Paper Co.

The Bedford Pulp & Paper Co. of Richmond is having plans and specifications prepared for rebuilding its pulp and paper mill recently destroyed by fire at Big Island, Va. Its new plant is to have a daily capacity of 55 tons, and H. S. Ferguson of New York is the engineer in charge. Including machinery and water-power improvements, the cost is estimated at more than \$400,000, and this includes about \$120,000 for the buildings.

Men's Clothing Buttons.

F. Kauffman, 50 Park street, St. Kilda, Melbourne, Australia, writes to the MANUFACTURERS RECORD as follows:

"Put me in communication with manufacturers of buttons suitable for men's clothing; if possible, obtain sample collections of same."

Literary Notes.

Fan Engineering Handbook. Published by the Buffalo Forge Co., Buffalo, N. Y. Edited by Willis H. Carrier, chief engineer. Flexible leather bound. 600 pages. Price \$3.

After over three years of work in bringing information and experimental data on fan system apparatus for heating, ventilating, mechanical draft, drying and humidifying, special exhaust blow-pipe system and other applications of fan blowers into form for the widest possible application, the Buffalo Forge Co. of Buffalo, N. Y., has issued its Fan Engineering Handbook. It contains over 400 pages of tables and charts and about 200 pages of descriptive matter on fan testing, fan de-

sign, fan characteristics, friction in air ducts and exhaust systems, mechanical draft, humidifying, heat losses, etc. The information contained forms a distinct advance in engineering knowledge as applied to the properties of air and the industrial handling of air in various conditions. Wide application of the information contained in the volume is indicated in the following outline of contents: Part 1 is devoted to the properties of air, weight, specific heat, relation of velocity, pressure, temperature and barometric pressure, dry and wet bulb thermometers, psychrometric tables, etc. Part 2 includes applications of fan systems for heating, ventilating, air washing, cooling, etc. Part 3 is devoted to air ducts, pressure losses, nozzle effects, etc. Part 4 deals directly with the apparatus, including the design and characteristics of fans, horsepower, pressure selection, etc.; fan testing, fan capacities, dimensions, heaters, air conditioning apparatus, engines, and the practical applications and data for the selection. Part 5 includes specifications, miscellaneous data, and a comprehensive index. The price of the book has been placed with the view to only covering the actual cost of publication, and it is evident that a valuable reference book is thus placed in the hands of engineers and others interested in the industrial handling and control of air.

Lumber and Its Uses. By R. S. Kellogg. Publisher, The Radford Architectural Co., Chicago, Ill.

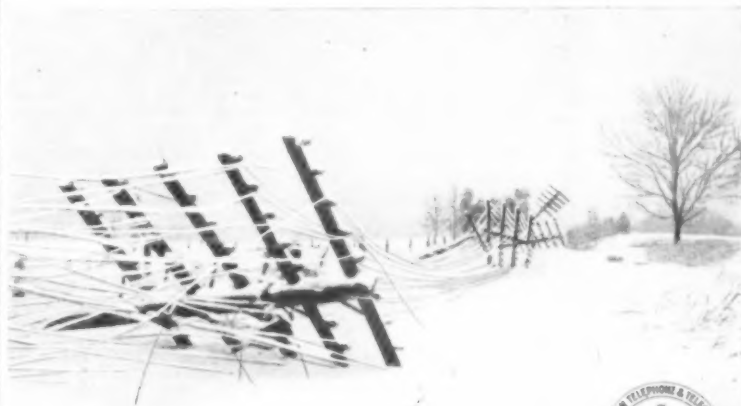
The practical lumber man as well as the student of economics and industry will find this work of value. In separate chapters it deals with the structure of wood, lumber grades, standard sizes of lumber, shipping weights, structural timbers, seasoning of timber, wood preservation, paints and stains, wood paving blocks, hardwood flooring, fire resistance, lumber prices, the uses of lumber, commercial woods, forest products, the timber supply, permanent advantages of wood and sources of information.

Metal Statistics, 1914. Published by the American Metal Market, New York City.

In the seventh edition of this valuable handbook the latest authoritative information of production and prices and distribution has been assembled in handy statistical form. It covers iron and steel, copper, tin, lead, spelter, aluminum, antimony, silver, gold and secondary metals.

A Legal Execution and Other Stories. By Jeanette Langley.

This is a collection of ten short stories by a Southern woman who has taken material right at hand in framing bits of attractive touches of human nature.



The Telephone Emergency

THE stoutest telephone line cannot stand against such a storm as that which swept the Middle Atlantic coast early in the year. Poles were broken off like wooden toothpicks, and wires were left useless in a tangled skein.

It cost the telephone company over a million dollars to repair that damage, an item to be remembered when we talk about how cheaply telephone service may be given.

More than half of the wire mileage of the Bell System is underground out of the way of storms. The expense of underground conduits and cables is warranted for the important trunk lines with numerous wires and for the lines in the congested districts which serve a large number of people.

But for the suburban and rural lines reaching a scattered population and doing a small business in a large area, it is impracticable to dig trenches, build conduits and lay cables in order that each individual wire may be underground.

More important is the problem of service. Overhead wires are necessary for talking a very long distance. It is impossible to talk more than a limited distance underground, although Bell engineers are making a world's record for underground communication.

Parallel to the underground there must also be overhead wires for the long haul, in order that the Bell System may give service universally between distant parts of the country.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY
AND ASSOCIATED COMPANIES

One Policy

One System

Universal Service

Classified Opportunities

MEN WANTED

UNDERSIGNED COUNSEL will confidentially negotiate preliminaries for important executive, technical, administrative and professional positions insuring strictest privacy. Not an agency, but a highly-endorsed, high-grade method of negotiating preliminaries only, for \$3000 to \$12,000 men. Send address only for explanation. R. W. Bixby, Lock Box 134-E6, Buffalo, N. Y.

PAINT AND BUILDING SPECIALTY SALESMAN. Established paint specialty house has well-paying position open for capable salesman thoroughly familiar with paint-consuming trade among factories, electric railways, county commissioners and large building owners generally. Address The Colorcraft Co., Cleveland, Ohio.

WANTED—Superintendent for planing mill; one who is competent and capable of producing results; must be a good estimator and hustler and understand taking work from plans; an excellent position for a good sober man. No. 1558, care Manufacturers Record, Balto., Md.

WANTED—Designer and detail man for billing out store fixtures of all kinds; must be accurate in measurements and willing to come to Louisville, Ky.; salary \$75 to \$100 per month. Address No. 1545, care Manufacturers Record, Balto., Md.

AGENCIES WANTED

WANTED—Agencies for building material, specialties, builders' and contractors' equipment, cement, terra-cotta, reinforcing steel, etc. Am acquainted with everyone in the building business in this territory and have had considerable experience selling to contractors. Am in a position to carry accounts if necessary. Address Sydney L. Heebinger, 614 M Street N. W., Washington, D. C.

WANTED—Live agents on a commission basis to handle full line of vises and other machinists' and plumbers' tools. Good opportunity for men calling on the shops and industries of the South and Southwest. Address "Vises," care Manufacturers Record, Balto., Md.

WANTED—Sales agency for all lines pertaining to builders' specialties; East Tennessee as territory; can furnish satisfactory references to interested concern; modern warehouse facilities. Address Daniel Briscoe, Jr., 325-327 State St., Knoxville, Tenn.

SITUATIONS WANTED

CONTRACTORS' ENGINEER—13 years' responsible charge large general contract work; 4 years' charge of estimates, contracts, office and field organizations. Will make investment with position as executive. No. 1554, care Manufacturers Record, Balto., Md.

A RETIRED ARCHITECT, a hustler, careful, methodical, and with executive ability, wants position with architect or builder; superintendent, office manager, specification writer, draftsman; is thoroughly versed in the best class of work. Address No. 1552, Manufacturers Record, Balto., Md.

WANTED—Position as superintendent of quarry; 14 years' experience; young man with small family; am hustler and good organizer; can furnish the very best of references. Address M. B. Malone, P. O. Substation No. 2, Charlotte, N. C.

GRADUATE of Georgia School of Technology, chemistry, 1914, desires position, preferably with up-to-date manufacturing enterprise; competent, energetic, resourceful, self-reliant; no bad habits. N. Y. Z., 116 President St. W., Savannah, Ga.

EFFICIENCY ENGINEER desires position vicinity Baltimore, Md., with industrial firm. Designing, systematizing, power testing. Member Efficiency Society of New York. Address No. 1558, care Manufacturers Record, Balto., Md.

CHEMIST—Open to a proposition as assistant with company offering good future. Best references. P. O. Box 153, College Park, Va.

CEMENT SALESMAN and building specialty man open for position in Southern territory. Best of references as to past and present record. Address No. 1556, care Manufacturers Record, Balto., Md.

WANTED—Position as private secretary to executive in any commercial line offering a future; 5 years' experience in various manufacturing lines; prefer to locate in Western North or South Carolina. Address No. 1557, care Manufacturers Record, Balto., Md.

WANTED—Young man, age 25, position with large concern who demands the services of a skilled accountant and auditor. Thoroughly competent to produce results. Furnish gilt-edge reference on application. Willing to locate in any section of country. Address No. 1552, care Manufacturers Record, Balto., Md.

RATES AND CONDITIONS

Rate 20 cents per line per insertion. Minimum space accepted, four lines. Maximum space accepted, 25 lines. In estimating the cost, allow seven words of ordinary length to a line. When the advertisement contains a number of long words, proper allowance should be made. Terms: Invariably cash with order; check, postoffice or express order or stamps accepted. No display type used. Questionable or undesirable advertisements will not be accepted. The assistance of our readers in excluding undesirable advertisements is requested. We reserve the right to refuse any advertisement. No patent medicine, whiskey or mining stock advertisements accepted. Rate for special contracts covering space used as desired within one year as follows: 100 lines, 18c. per line. 300 lines 16c. per line. 500 lines or more, 15c. per line.

EDUCATIONAL

RENSSELAER POLYTECHNIC INSTITUTE, TROY, N. Y.—Courses in Civil, Mechanical, Electrical and Chemical Engineering and General Science, leading to the degree of Civil Engineer (C.E.), Mechanical Engineer (M.E.), Electrical Engineer (E.E.), Chemical Engineer (Ch.E.), and Bachelor of Science (B.S.). Also special courses. Splendidly equipped new engineering laboratories. Send for catalogue to Registrar.

SAWMILL DIRECTORY

DIRECTORY OF SAWMILLS, covering States of Alabama, Arkansas, Kentucky, Louisiana, Mississippi, Tennessee and West Virginia. Index on each page shows where plant is located; its capacity; railroad upon which located; what the plant turns out and what its equipment consists of, that is, whether mill is band or circular, whether it has electric-light plant, logging railroad, etc. States specifically what kind of lumber is produced, covering more than 50 different kinds. Sold separately by States at \$3 per State, or \$15 for all eight States. More than 10,000 mills reported on. Address Southern Lumberman, Nashville, Tenn.

CAPITAL WANTED

A GOING FLORIDA LAND COMPANY owning originally 35,700 acres of land, of which 23,000 acres have been sold on monthly payment plan, good live assets (June 1, 1914) of \$333,949.56, and liabilities amounting to \$107,687.84, wishes to refund \$85,000 of its indebtedness for (on or before) three or five years. Will pay 6% and a fair bonus. Ample secured. Best of references. Will pay necessary expenses for audit of books and examination of land. Address, for full particulars, P. O. Box 252, Kansas City, Mo.

\$60,000 DEVELOPMENT CAPITAL wanted at once. Security, first mortgage on 44,000 acres richest tropical agricultural and timber land, Tabasco. Hundred million feet mahogany and other precious woods. On great river. Easy access. Title and all conditions perfect. Address J. P. Lewis, Petersburg, Va.

BUSINESS OPPORTUNITIES

CLAY TRACT of 41 acres on Tidewater & Western R. R. at crossing county road about one mile from Bermuda on James River, known as Epps' Crossing. Tract has been tested over its entire surface, showing clay exists to the depth of 4 1/2 feet and covers entire property with overburden of 3 to 9 inches. The State Geologist reports as being the best found on the coastal plain, suitable for pipe, tile, pavers, fireproofing, and stiff-mud and dry-press face brick. Burns a dark cherry red, drying easily and safely.

This valuable clay bed, with a manufacturing site at Chester, for sale reasonable. The manufacturing site, consisting of between 3 and 4 acres, is on A. C. L. R. R. at junction of Tidewater & Western R. R., affording splendid shipping facilities to North or South by A. C. L. N. & W., S. A. L. T. & W., or by water. With proper development should prove a good money-maker. Full particulars upon request. Address Central Realty Co., Richmond, Va.

FOR SALE, or will exchange for timber lands or improved farm lands, half interest in planing mill and woodworking establishment with lumber yard in connection; doing \$65,000 annual business and increasing; plant located in heart of a live Kentucky town of 10,000 inhabitants; surrounded by a wealthy farming country. This is an excellent opportunity to get into a paying manufacturing and lumber business. Address No. 1560, care Manufacturers Record, Balto., Md.

INFORMATION any subject; coal, iron and lumber production; exports and imports; Gov't bids; legislation; trade opportunities; statistics, etc. Also daily and weekly news service. Reports \$1. General Information Bureau, Box 441, Washington, D. C.

MANUFACTURER WANTS STATE MANAGER to establish office and manage salesmen; liberal commission; references required; \$500 to \$5000 capital necessary. You handle own money. Secretary, 406 Fisher Bldg., Chicago.

WANTED—Two reliable men with practical knowledge of store and office fixture business to invest \$1250 each, with services, in well-established and equipped manufacturing plant showing good returns. Best of references. Apply at once. Elliot & Co., Norfolk, Va.

WANTED—To connect with individuals who will be willing to invest \$15,000 in a very successful graphite company in the best section in the South. The company is most successful in selling its product, and with additional capital can enjoy increased sales at a large profit. The best references can be given. Address P. O. Box 732, Atlanta, Ga.

DOORS

WANTED—To contract the output of our door factory; capacity, about 100 doors daily. W. R. Flowers Lumber Co., Dothan, Ala.

HOTELS FOR SALE

FOR SALE—Small hotel at Wrightsville Beach, known as Hanover Inn, 40 rooms, completely equipped. Sale at auction July 15, 1914. For description and full information write J. G. Wright & Son, Real Estate Agents, Wilmington, N. C.

NEW modern hotel; 30 rooms, elegantly furnished. In good, live town at junction of 2 trunk line railroads. 12 passenger trains daily. Price and full information on application. Lane-Harris Corporation, Altavista, Va.

MODELS

MODELS MADE FOR INVENTORS.—General machine work. Designing and perfecting. Developing automatic devices and machinery. In a position to do all kinds of light tool and machine work. Prices reasonable. Estimates cheerfully given. Ideal Machine Works, 64 Ann Street, New York City.

INDUSTRIES WANTED

MISCELLANEOUS
FREE SITE given for factory; electric power cheap; no city tax; 2 railroads; plenty of labor. Berkeley Land Company, Martinsburg, W. Va.

NORTH EAST, MARYLAND, has free land and other lend-a-hand inducements to offer for new industries. Midway between Baltimore and Philadelphia. Pennsylvania and B. & O. Railroads. Write to the Board of Trade, North East, Md.

BLUEFIELD, WEST VIRGINIA, the gateway to the vast Pocahontas coal fields, and the distributing point for half a million contented laborers, needs an overall factory, needs a mine implement factory and needs a brick plant. Address C. T. Boykin, Secretary Bluefield Chamber of Commerce.

INDUSTRIAL PLANTS FOR SALE

MILLWORK PLANT AND PLANING MILL
MILLWORK PLANT AND PLANING MILL FOR SALE; practically new; in thriving town of 16,000 inhabitants; water and rail facilities. Pleased to correspond or interview interested parties. Address No. 1561, care Manufacturers Record, Balto., Md.

BROOM HANDLE FACTORY

FOR SALE—A complete broom-handle factory; have splendid machinery. G. W. Atherton, Livermore, Ky.

LIME PLANT

FOR SALE—Eight-kiln lime plant in East Central Tennessee for sale; owner wants to convert into cash; now operating; gravity transportation from quarry to kilns; favorable freight rates for wide territory, including parts of Florida and Louisiana and North Carolina. Address E. H. Pringle, Jr., Charleston, S. C.

LIME AND STONE PLANT

OWING TO FAILING HEALTH of owners, we offer for sale our prosperous and long established lime and stone plant, located in the best limestone section of Maryland, on the B. & O. R. R., with sidings connecting P. R. R. and W. M. R. R. Lime product sold in seven States; plant well equipped with machinery; can be quickly enlarged to meet the increasing demand for products. Millions appropriated by State for roads; situated to supply large area of stone required; have contracts for stone at good prices; 37 acres in the property, all underlaid with unlimited deposit of high calcium limestone; 6 kilns, 2 stone crushers, boiler, hoist, lime pulverizer, 2 engines; other equipment, 2 houses and other buildings. Large body of yellow sand and rich brick clay. Fair freight rates for product to all sections; plant in daily operation. A big and safe money-making business, with possibilities for large expansion. A rare chance for making raw pulverized limestone, the coming land fertility producer. Address P. O. Box 127, Frederick, Md.

OIL MILL

FOR SALE—Splendid oil mill location with established business. Property consists of four acres of land on railroad siding, office building and scales, ginnery with 8 gins in good condition, 75-horse-power Corlies engine, two boilers; all in readiness for the approaching ginning season. Abundant supply of local seed. Hull and meal trade established. Nearest oil mill 36 miles. Excellent opportunity for party wishing to build oil mill or conduct a ginning business and handle seed, meal and hulls. This property will be sold at public sale in Salley, June 30. Address Box 126, Salley, S. C.

IRON WORKS FOR RENT

SAYRE IRON WORKS FOR RENT.—In complete running order. Cupola, traveling and stationary cranes, flasks, concrete foundry building 78x200 feet, pattern shed, machine shop, office building, all separate. Water transportation from Old Point, and located directly on Chesapeake & Ohio Railroad. Good business. Now renting for \$225 a month. Apply Jas. M. Cumming, Phoebus, Va.

MINERAL AND TIMBER LANDS, WATER POWERS AND MISCELLANEOUS PROPERTIES

202 1/2 ACRES, kaolin deposit between 35 and 50 acres, \$15,000. 202 1/2 acres Fuller's earth deposit, \$15,000. Southern Ins. & Realty Co., Georgia Life Bldg., Macon, Ga.

THIRTY THOUSAND ACRES MINERAL AND FARM LANDS to suit, improved or unimproved, \$10 and up. Gold and mineral clay lands. Great opportunity. Write to Box 455, Abbeville, S. C.

FOR SALE ON REASONABLE TERMS: 25,000 acres, Escambia county, Alabama, especially adapted for colonizing.

15,000 acres highest grade Southern hardwood timber, located Southern Mississippi.

14,000 acres, located in Southern Alabama; about 30,000,000 ft. L. L. yellow pine on 7500 acres of this. Land is especially desirable for agricultural purposes.

24,000 acres coal and timber land, located on Frisco Railroad west of Birmingham.

5000 acres of hardwood timber, located on the Alabama River not far from Mobile.

5000 acres, especially desirable for citrus fruit growing, including a townsite located just across the bay from Mobile.

10,000 acres, located in North Baldwin, especially adapted for ranch.

I own and control all of the above-described properties, and in addition I handle properties as a broker, so that I am in a position to meet most any requirements in Southern acreage property. Address H. H. Wefel, Jr., Mobile, Alabama.

BRICK CLAY PROPERTY

BRICK CLAY.—Attention, Brick Men! Have located within five miles of Atlanta large supply fine brick clay; excellent rail facilities. This property is splendid location for Southern market. Can be bought reasonably, considering actual value. Estate of James E. Lynch, P. O. Box 519, Atlanta, Ga.

COAL MINE FOR SALE

HIGH-CLASS COAL Mine and Washer, located in Southern Illinois, mining what is known as Carterville coal, for sale or exchange for timber land or any good income property to volume of \$150,000. Gent-Jones Brokerage Co., 317 Fisher Bldg., Chicago, Ill.

COAL MINE, on Mexican border, American side; railroad gateway; unlimited coal. When war is over will make fortune. S. G. McWhorter, Frost Bldg., San Antonio, Texas.

COAL LAND FOR SALE

COAL LANDS.—I can offer you 376 acres coal land, with several houses, on railroad, at a bargain; can be opened up at small expense; excellent opportunity for experienced coal man. F. O. Havener, owner, Parkersburg, W. Va.

FOR SALE—1000 acres of coal land, Marion county, 3 miles from station, Illinois Central Railroad; Black Creek coal seam, 32 to 24 inches. Price, \$30 per acre. Terms, L. P. Hill, 1924 Fourth Ave., Birmingham, Ala.

Classified Opportunities

FOR SALE—719 acres actual coal land; 2 veins, 7 and 2 feet; $\frac{3}{4}$ of a mile down grade to railroad. Best proposition in Montgomery coal field. B. F. Calaway & Co., Blacksburg, Va.

TIMBER LAND FOR SALE

TWO HUNDRED THOUSAND (200,000) acres timber land in Florida, containing over 5,000,000 feet of original growth pine; has been cruised by expert; placed on the market for the first time at a very low figure. South Carolina timber; 15,000 acres on the Atlantic Coast Line and Southern Railroad. Estimated 65,000,000 feet short-leaf pine. For price and full particulars apply to Johnson's American and Foreign Real Estate Exchange, 945 Pennsylvania Avenue, Washington, D. C.

FOR SALE—32,000 acres yellow pine DeSoto Co., Fla.; will cut about 70,000,000 feet pine and 5,000,000 feet cypress. Reasonable terms. Address Box 135, Wauchula, Fla.

FOR SALE—\$2,000 acres timber land in Northwestern Alabama and Northeastern Mississippi, located on I. C. R. R., cruised to cut 6500 feet per acre; 50% short-leaf pine; balance in poplar, white and chestnut oak. Will allot in 10,000 to 20,000 acres to suit purchaser. Easy terms. Gent-Jones Brokerage Co., 317 Fisher Bldg., Chicago, Ill.

146,386 ACRES of West Florida yellow pine timber lands at tidewater on the Gulf of Mexico, two-thirds of the acreage round timber, for sale by trustee in bankruptcy; 310,000,000 pine, 10,000,000 feet cypress lowest cruiser's estimate; compact body, running to St. Joseph's Bay, Fla., 100 miles south of Tallahassee; Government intercostal canal runs midway of tract through longest dimension; land worth more for colonization after timber is cut than price asked now; appraised by Bankruptcy Court at \$1,125,000; trustee will cut that \$250,000 for prompt sale. Terms. C. E. Dolson, Pensacola, Fla.

TIMBER AND TIMBER LANDS IN ALABAMA—Tracts of virgin pine and hardwood, 5000 to 20,000 acres each; fee simple; all finely located; 9000-acre tract pierced by main trunk-line railroad and admirably situated for colonization; cut good; prices right. Correspondence solicited from parties meaning business; otherwise don't write. T. M. Bradley, 429 First National Bank Bldg., Birmingham, Ala.

FOR SALE—1000 acres timber land in one and two miles of Louisville & Nashville Railroad, 30 miles east of Memphis, Tenn. There are two million feet of gum and other valuable timber, such as white oak and red oak and hickory, on this land. Will offer this property for the next 10 days for \$30 per acre. Also have a sawmill outfit will sell with the land. Box 907, Memphis, Tenn.

NO. 547—VIRGINIA TIMBER TRACT—100 ACRES—\$3500; located in Albemarle county on a good road; 2 miles from railroad; estimated to cut over 1,000,000 feet of oak, pine, poplar and chestnut. For particulars regarding this and other timber and mineral tracts and farm lands inquire of Edward S. Wilder & Co., Charlottesville, Va.

HARDWOOD TIMBER TRACTS, 1000 acres up, direct from owners; cut 4000 feet white oak to acre; \$8 acre in fee; near proposed railroad, Newton county. Also have cheap stock and colonization tracts. Fredricks, Springdale, Arkansas.

WE HAVE 7160 acres timber land in Levy County, Florida. Will cut 10,000,000 feet of Pine and Cypress. Price \$4 per acre cash. Write Waring & Edwards, Lakeland, Florida.

5400 ACRES of virgin hardwood timbered land in East Tennessee, \$10 per acre; would exchange. Farm Realty Co., 328 Jefferson Co. Bank Bldg., Birmingham, Ala.

FOR SALE—2500 acres of timber land on Tombigbee River. All estimated to cut 15,000,000 feet 50 per cent. red and white oak, 40 per cent. red gum, 10 per cent. poplar and hickory. This is all fine river bottom land and good timber. Price \$25 per acre. J. N. Lunn & Co., 315 Fourth Ave., North, Nashville, Tenn.

A FEW GOOD TRACTS in Southern States at prices attractive for investment or operation. Hemlock, spruce, oak, poplar, gum, cypress. Real Estate Investment Co., 816 Connecticut Ave., Washington, D. C.

TIMBER TRACTS located for manufacturers or investors by practical timbermen. Correspondence solicited. Jo A. Parker, Parma, Mo.

LONG LEAF YELLOW PINE in tracts of five thousand to one hundred thousand acres. Prices, terms and timber are best obtainable. Gould-Wooten Co., Box R, De Land, Fla.

FARM AND TIMBER LANDS

FOR SALE—Farm and Timber Land in Southeast Georgia. Land produces two and three crops per year. Especially adapted to growing cotton, corn, alfalfa and, in fact, anything that grows in the Southern States. If interested, write us for full information. South Georgia Farms & Realty Co., Fitzgerald, Ga.

7240 ACRES on S. A. L. Railroad will cut as follows:
2,500,000 feet pine at \$2.50 M..... \$6,250.00
2,000,000 feet hardwood at \$2 M..... 6,000.00
2,000,000 feet large cypress at \$3 M.... 6,000.00
40,000 cypress ties at 10c. each..... 4,000.00
10,000 cords of wood at 25c. cord..... 2,500.00
10,000 cypress poles at 25c. each..... 2,500.00

Total for timber.....\$27,250.00
Now, listen! Owing to other interests that will not let owners attend to this tract, we can sell this tract for \$27,500. When timber is taken off you will have as fine cattle ranch and farming land as you want. Remember, \$27,500 in fee. Southern Insurance & Realty Co., 314 Ga. Life Bldg., Macon, Ga.

FOR SALE—About 20,000 acres of land in fee in Eastern North Carolina, in close proximity to railroad. This land contains about 60,000,000 feet of pine and cypress timber. The land without the timber is splendid for farming. With the timber off is worth the price asked for the whole. Timber, Box 1089, Norfolk, Va.

FIFTEEN THOUSAND FOUR HUNDRED ACRES of good truck and citrus-fruit land, located in Santa Rosa county, twenty miles east of Pensacola. Seven thousand acres of this land is covered with a heavy growth of long-leaf pine, which will cut about twelve million feet. Price three dollars per acre. W. H. Upp, Box 331, Pensacola, Fla.

10,000 ACRES clay subsoil land, covered with long leaf pine; several lakes; fish galore, and thousands of deer and game; price, \$5 an acre. Also 15,000,000 feet fine timber. B. H. Tyson, Pikeville, N. C.

FARM AND TIMBER LAND on the easy-payment plan; some small improved tracts; good for cotton, corn, alfalfa and grain. Prices from \$4 to \$25 per acre. W. Knight, Real Estate Dealer, Bigelow, Arkansas.

COLONIZATION LANDS

4000 ACRES, 20 miles from Jacksonville, Fla.; 3000 acres surveyed, staked into 10-acre tracts; artesian wells, 15-room hotel, 4-mile river front, wharf, warehouses; parked, staked boulevard 80 ft. wide; 2 steamboats and railroad to the North; good truck land; 500 acres already sold at \$30 an acre. Price, \$12.50 an acre; \$10,000 cash. H. M. Pindell, 206 Clark Building, Jacksonville, Fla.

DAIRY FARM

A POSITIVE BARGAIN—480-acre dairy farm, 18 miles from Baltimore, 2 miles R. R.; 3 houses; 2 barns with every modern convenience; revenue of farm, \$10,000 annually; shipping 100 gallons milk daily. For quick sale, stock, crop, implements, \$75 per acre. E. H. Ankeny, American Bldg., Baltimore, Md.

FARM AND CITRUS GROVE WANTED

WANTED—I want to buy 20 to 50 acres improved farm and citrus grove in DeSoto county, Fla. Please write full particulars. Please state capabilities and nature of soil, also number of acres in and capabilities of groves, condition and number of houses, distance from railroads, packing-houses and towns—in fact, all information you can give. T. P. Blackmon, Marietta, Ga., R. F. D. No. 5.

FRUIT, FARM AND TRUCK LANDS

ALABAMA

FOR SALE—2965 acres in Tallapoosa county, Alabama; 1000 acres river bottom; pays 12 per cent. on investment; \$15 per acre. For particulars write Charles A. Stewart, Temple Court, Chattanooga, Tennessee.

WANTED—To sell 490-acre farm, 3 miles from Elba, Ala.; 100 acres open; 2 settlements and necessary outhouses; artesian well; 80 acres yellow pine timber; other adjoining can be bought cheap; land adapted to anything grown South. Reason for selling, am too old to look after it. For information write F. H. Allred, Elba, Ala.

3420 ACRES at Donovan Station, on N. O. & C. Ry., 34 miles from Mobile. Oranges, grapes, peaches, plums, pecans and quinces now bearing. Full description on application. A rare chance for investment, stock farm or small colony. Abstract and perfect title. \$5 per acre. W. W. Woodruff, 409 City Bank, Mobile, Ala.

FLORIDA

THE PALATKA FARMS COMPANY of Palatka, Florida, offers to homeseekers the very superior advantages of splendid soil, adapted to potatoes, corn and trucking, or that for oranges and grapefruit, or for combination of both, with location unsurpassed, lying along the beautiful St. Johns River, 2 miles of Palatka, an up-to-date city of 8000 population. It boasts of electric-light and gas plants, four railroads and cheap river transportation. Write for literature. P. J. Becks, Palatka, Fla.

PINEY POINT, the Deep-Water City. Other towns and would-be towns have to fight and wait for appropriations to get deep-water facilities.

Nature made it for us, and in addition gave us immunity from frost, for just north of Piney Point is the broad expanse of Tampa Bay.

Teracela Island and the Manatee River towns and farms have good water protection, but not deep water. We have both.

Also an abundant supply of artesian water for all purposes.

Nature laid the foundation. We are doing the rest. Will you join us? The Piney Point Land & Improvement Co., Palmetto and Piney Point, Fla. Jno. W. Jackson, Manager.

THREE MONTHS FREE—Subscription to the Indian River Farmer. For truckers, fruit growers, general farmers, and folks who want to know about Florida. Address Indian River Farmer, Dept. "V-1," Vero, Fla.

MARYLAND

FOR SALE—Productive Carroll County, Md., farm; 350 acres, near Railroad Station; stone dwelling, necessary outbuildings, all in good order. Well watered; fruit. Complete equipment if desired. Suitable for dairy, stock, fruit or general farming. D. Sterrett Citings, Real Estate Broker, 401 Maryland Trust Bldg., Baltimore, Md.

NORTH CAROLINA

FOR information regarding the best and lowest priced farm proposition in the rapidly developing lower Piedmont of North Carolina address J. R. McConnell, R. & C. Ry., Carthage, N. C.

SOUTH CAROLINA

FOR SALE—584 acres, 1 5-room dwelling, 2 tenant-houses, 2 barns, 2 branches, 2 springs, 200 acres in timber, 175 acres in cultivation, 50 acres in pasture, 35 acres in bottom land; 7 miles from Abbeville, 3 miles from Verdery, 11 miles from Greenwood. Price \$7.75 per acre. A. J. Davis, Troy, S. C.

VIRGINIA

1450-ACRE RIVER FARM, 28 miles from Richmond, Va., 5 miles from railroad; about 250 acres in cultivation, 200 acres rich low grounds, 300 acres young timber, balance rich new land from which timber has been cut; soil suitable for usual crops, trucking and bright tobacco; 4 dwellings, 4 to 9 rooms each; several sets of barns and outbuildings; grove of English walnuts, one of pecans and about 10 acres of chestnuts; several large orchards, all in bearing; a really good farming proposition in a healthy and desirable section, and should also appeal to a sportsman, for there is plenty of game and fish. Price \$15 per acre. A. L. Adamson, 813 Hull St., Richmond, Va.

JAMES RIVER, VIRGINIA, FARM, with good duck and hunting ground, deer, wild turkeys, geese, quail, etc.; abundant, good fishing. Farm excellent chocolate soil; drains naturally; fenced and cross-fenced with woven wire. Good buildings; ideal location; 50 minutes' automobile ride from city. Good river and road front; considerable timber. Cheap to settle estate. For price and particulars write Ruffin & Sloan, Richmond, Va.

FARMS FOR SALE—Large list Northern Virginia grazing, grain, fruit and poultry farms; colonial estates; \$500 to \$80,000; catalogue. B. F. Perrow, Remington, Virginia.

VIRGINIA, the ONLY just right climate. Elegant farm, ten to thirty dollars acre. One-third cash, balance when convenient. J. E. Barrett, Carrsville, Va.

REAL ESTATE INVESTMENTS

WILL YOU INVEST \$3000, \$6000, \$12,000 or \$24,000 in real estate, to be leased at 6 per cent. for 5 years, if you are satisfied it will be worth, at the end of the lease, five times the investment and pay you net annually as much as it originally cost? There are four \$3000, two \$6000, two \$12,000 and two \$24,000 properties. State what you can handle. Bank references given and required. Address No. 1551, care Manufacturers Record, Balto., Md.

WAGONS FOR SALE

WAGONS FOR SALE—Ten Troy dump-bottom reversible traction wagons, 3 1/2-yard, with 10-inch tires; have been used four months. Geo. E. Hefferson, care Manufacturers Record, Balto., Md.

SAFES AND VAULTS

I HAVE FOR SALE one large fire and burglar proof and one large steel burglar proof safe; also, fireproof safes and vaults, both new and second-hand. W. A. Wilson, 126 E. Pearl St., Cincinnati, O.

FOUNDRY PATTERNS

FOUNDRY PATTERNS FOR SALE—Complete equipment of commercial foundry patterns, representing an investment of about \$50,000. Can be had very cheap for cash. No. 1553, care Manufacturers Record, Balto., Md.

PATENTS AND INVENTIONS

INVENTIONS developed by practical manufacturers. We have designed and manufactured the simplest and most complicated devices. References furnished. Russell Machine Co., Live Oak St., Dallas, Texas.

PATENT ATTORNEYS

EUGENE C. BROWN, ENGINEER AND PATENT LAWYER, Suite 40 Victor Building, Washington, D. C. Member Bar U. S. Supreme Court. Patents and Trademarks. Inventions are considered both from Engineering and Legal standpoints in my prosecution of patents. An experience of over 9 years as Examiner in U. S. Patent Office and over 6 years as Patent Expert in important patent suits are my special qualifications. Reports upon validity and infringement. Send sketch of invention for advice.

PATENTS—Herbert Jenner, patent atty. and mechanical expert, 606 F St., Washington, D. C. I report free of charge if a patent can be had and its exact cost. Send for circular.

PATENTS THAT PROTECT—Careful, honest work in every case. Patent your ideas; they may bring you wealth. 64-page book free. Fitzgerald & Co., 817 F street, Washington, D. C. Established 1873. Send for our book.

PATENT YOUR INVENTION—Send sketch for free expert search and report as to patentability. Books on inventions and patents, and book of references from congressmen, manufacturers, bankers and inventors, sent free. John S. Duffie & Co., Patent Attys., 620 F St. N. W., Wash., D. C.

"PATENTS AND PATENT POSSIBILITIES" is a 72-page treatise which tells all about patents, what to invent and where to sell it. It gives honest advice to inventors and is full of valuable and interesting information. Write for it today! It is free. H. S. Hill, 916 McLachlen Bldg., Washington, D. C.

PATENTS THAT PROTECT AND PAY. Advice and books free. Highest references. Best results. Promptness assured. Send sketch or model for free search of Patent Office records. Trade-marks registered. Watson E. Coleman, Patent Lawyer, 624 F St., Washington, D. C.

PATENT YOUR IDEAS—\$9000 offered for certain inventions; book, "How to Obtain a Patent" and "What to Invent," sent free upon request; send rough sketch for free report as to patentability. We advertise your patent for sale at our expense. Chandee & Chandee, patent attorneys, 978 F St., Washington, D. C.

PATENTS secured or Fee returned. Send sketch for free report as to patentability. Guide book and what to invent, with valuable list of inventions wanted, sent free; \$1,000,000 offered for one invention; \$16,000 for others. Patents secured by us advertised free in World's Progress; sample free. Victor J. Evans & Co., Washington, D. C.

Your Best Investment

If you are interested in the South and Southwest and want to keep in touch with this fast growing section, read the Manufacturers Record *every week*.

\$4.00 a Year

Less Than 8c. a Week

PROPOSALS

BOND ISSUES

BUILDINGS

PAVING

GOOD ROADS

GOVERNMENT PROPOSALS

TREASURY DEPARTMENT. Supervising Architect's Office, Washington, D. C., June 18, 1914. Sealed proposals will be opened in this office at 3 P. M. July 30, 1914, for the construction, complete (including mechanical equipment, lighting fixtures, and approaches), of the United States postoffice and courthouse at Cookeville, Tenn. Three-story-and-basement building; ground area, 5000 square feet; first floor fireproof; stone, ornamental terra-cotta, and brick facing; composition and slate roof. Drawings and specifications may be obtained from the custodian of site at Cookeville, Tenn., or at this office, in the discretion of the Supervising Architect. O. WENDEROTH, Supervising Architect.

TREASURY DEPARTMENT. Office of the Supervising Architect, Washington, D. C., June 20, 1914. Sealed proposals will be received in this office until 3 o'clock P. M. on the 13th day of July, 1914, and then opened, for suspended ceilings, new floors, alterations, repairs, etc., in the Auditors' Building (old building, Bureau of Engraving and Printing), Washington, D. C. Specifications and drawings may be obtained at this office in the discretion of the Supervising Architect. O. WENDEROTH, Supervising Architect.

PROPOSALS will be received at the Bureau of Supplies and Accounts, Navy Department, Washington, D. C., until 10 o'clock A. M. July 14, 1914, and publicly opened immediately thereafter, to furnish at the Naval Academy, Annapolis, Md., a quantity of naval supplies, as follows: Sch. 6220, lathes, Sch. 6246, brass and galvanized pipe, lamp cord, nickel-plated floor plates, compression laths, brass bushings, nipples, and plugs, pipe vise, wrenches, hinges, screw eyes, bolts and nuts. Applications for proposals should designate the schedules desired by number. Blank proposals will be furnished upon application to the navy pay office, Baltimore, Md., or to the Bureau. T. J. COWIE, Paymaster-General, U. S. N.

U. S. ENGINEER OFFICE. Wilmington, N. C., June 10, 1914. Sealed proposals for about 1576 tons of steel sheet piling and accessories will be received at this office until 12 M. July 10, 1914, and then publicly opened. Information on application. H. W. STICKLE, Maj., Engineers.

BOND OFFERINGS

Bonds For Sale

McComb, Miss.
The Board of Mayor and Aldermen of McComb City, Miss., will sell \$50,000 of "City Hall" bonds on July 7, 1914, at 8 o'clock P. M. A certified check for \$500 must accompany the bid to receive consideration. The Board reserves all rights.
J. DOCK HARRELL,
City Clerk.

Municipal Bonds

White Sulphur Springs, W. Va.
Sealed bids will be received by the town of White Sulphur Springs, W. Va., until one o'clock P. M. Tuesday, July 14, 1914, for \$8000 6 per cent. ten and twenty-year Water and Sewer Bonds. Certified check for 10 per cent. of bid to be enclosed. The right is reserved to reject any or all bids. Assessed valuation of property is \$407,665. For further information address B. F. Dixon, Mayor, or Howard Templeton, Recorder.

\$35,000 6% 13-Year Bonds

Sealed bids will be received at Courthouse, Salisbury, N. C., by the Board of Drainage Commissioners for Grant's Creek Drainage District, Rowan county, N. C., on Tuesday, the 14th of July, 1914, at 10 o'clock A. M., for \$35,000 of drainage bonds. The said bonds bear six per cent. interest, and are payable one-tenth in three years from date of issue and ten per centum annually thereafter. Certified check for \$500 required. The right to reject any and all bids is reserved.
This June 25, 1914.
C. M. MILLER, C. E. and Supt.,
Salisbury, N. C.

Notice of Bond Sale

Kosciusko, Miss.
Notice is hereby given that the Board of Supervisors of Attala County, Mississippi, will receive sealed proposals for the purchase of \$50,000 worth of District Number One Road Bonds of Attala County, Mississippi, on the first Monday in July, 1914, bearing a rate of interest not to exceed six per cent. per annum, interest payable semi-annually, and to be dated July 1, 1914, and due and payable from 10 to 25 years from their date, and to be in denominations of \$500, numbered from 1 to 100, inclusive.
Each proposal to be accompanied by a certified check for \$2000.
The Board reserves the right to reject any and all bids and to sell the bonds in the open market where the best price can be obtained.
This being the second installment of \$150,000 worth of bonds of District Number One of Attala County, Mississippi.
Witness my signature this 10th day of June, 1914.
J. H. OLIVER,
Clerk of the Board of Supervisors of Attala County, Mississippi.

PROPOSAL ADVERTISING INFORMATION

RATE: 20 cents per line per insertion.

PUBLICATION DAY: Thursday.

FORMS CLOSE 9 A. M. Wednesday. Copy received later cannot be published until issue of following week.

NIGHT LETTER: When too late to send copy by mail to reach us by 9 A. M. Wednesday, forward by night letter.

THE DAILY BULLETIN OF THE MANUFACTURERS RECORD:

Published every business day; gives information about the industrial, commercial and financial activities of the South and Southwest.

The Daily Bulletin can be used to advantage when copy cannot reach us in time for publication in the Manufacturers Record before bids are to be opened, or when daily publications are necessary to meet legal requirements.

The same rate applies—20 cents per line per insertion.

Municipal Bonds For Sale

Fifteen thousand dollars twenty-year 6 per cent. bonds, approved by the best attorneys. Further information, address C. G. Talbutt, Batesville, Miss.

\$25,000 Thirty-Year 6% General Improvement Bonds

TOWN OF BARTON HEIGHTS (SUBURB OF RICHMOND), HENRICO COUNTY, VIRGINIA.

Sealed proposals will be received by the Town Council of the Town of Barton Heights at a meeting specially called for the purpose, to be held in the Council Chamber of the town on the evening of Tuesday, July 7, 1914, at 8:30 o'clock, for the purchase of the entire issue or any portion thereof of the \$25,000 General Improvement Bonds of said town, being 25 bonds in the denomination of \$1000 each.

Said bonds are issued for general improvement purposes and bear date July 1, 1914, are payable 30 years after date in lawful currency of the United States, and bear interest at the rate of six per cent. per annum, payable semi-annually, interest represented by coupons payable at First National Bank of Richmond, Virginia.

The Town Council reserves the right to reject any or all bids.
All bids to be made and considered in good faith and no deposit required with bid.

The Town of Barton Heights is within the lines proposed to be annexed by the city of Richmond and is a party to the proceedings now pending.

Further information will be cheerfully furnished upon application.

Address all bids to
THOMAS ARMSTRONG,
Chairman Finance Committee,
Town of Barton Heights, Richmond, Va.

\$27,000 City of Bushnell (Florida) 6% Bonds

Notice is hereby given that the City of Bushnell, in Sumter county, Florida, under authority granted by Section 36 of its Charter and Chapter 6671 of the laws of the State of Florida, will receive bids at the office of J. Tom McCollum, Clerk of said city, until 8 o'clock P. M. on Tuesday, July 14, 1914, for purchase of 108 bonds of said city, of the denomination of \$250, to be dated July 1, 1914, bearing interest at the rate of 6 per cent. per annum, interest payable annually on the 1st day of July; 5 of said bonds maturing July 1, 1919; 5 on the 1st day of each July up to and including 1922; 6 on the 1st day of every July thereafter up to and including 1926; 7 on the 1st day of each July thereafter up to and including 1930, and 9 on the first day of each July thereafter up to and including 1934. \$15,000 of said bonds being for Street Improvement and \$12,000 for Water System. Bonds may be bid on separately or combined. Interest and bonds payable at the Citizens' Bank of Bushnell.

Certified check for 5 per cent. of face of bonds bid for must accompany each bid as evidence of good faith.

Right reserved to reject any and all bids.
Done at Bushnell this 11th day of June, 1914.

J. TOM MCCOLLUM,
City Clerk.

PAVING AND GOOD ROADS

Road Construction

NOTICE TO CONTRACTORS.

Okolona, Miss.

The Road Commissioners of the Third Supervisors' District of Chickasaw County will receive bids at office of R. J. West, Attorney, Okolona, Mississippi, up to 12 o'clock noon of Friday, July 3, 1914, for the construction of approximately nine and one-quarter miles of graded and graveled roads. Profiles and specifications may be seen at office of R. J. West, or will be mailed on receipt of \$2.50.

Forms for proposals will be furnished on request.

JAS. S. ROWE,
F. M. ELLIOTT,
C. B. EVANS,
Commissioners.

Notice to Road Contractors

New Martinsville, W. Va.

Notice is hereby given that sealed bids will be received by the County Court of Wetzel County, West Virginia, at the Courthouse in the town of New Martinsville, West Virginia, up to 12 o'clock noon on the 18th day of July, 1914, for the building and improvement of approximately twenty-two miles of dirt road in Grant District in said county.

Plans and specifications for said work, form of proposal, contract and bond required are now on file in the office of F. W. Parsons, County Road Engineer, New Martinsville, W. Va., and in the office of L. E. Lantz, Chairman of the Grant District Road Committee, Jacksonburg, W. Va., as well as in the office of the Clerk of said County Court, in the town of New Martinsville.

Bidders must satisfy themselves as to the conditions and amount of road to be built, and bids must be made for each mile separately. Bids may be made for the entire mileage.

Each bid must be accompanied by a draft or certified check on a responsible bank or trust company, payable to the order of the Sheriff of Wetzel county, for five per cent. of the amount of the bid, as guarantee that bidder will enter into contract for said work and execute bond as required if his bid is accepted.

Each bid must be made on blank form adopted by said Court, copies of which may be obtained from the County Road Engineer or from the Chairman of said Grant District Road Committee.

The County Court shall have the right to accept the bid of the proposer and award the contract for any one or more miles of road bid for, unless the bidder specifically sets forth in his bid that the same shall not be done.

Bond in a penalty equal to the amount of the bid, with surety to be approved by said Court, will be required with each contract.

The right is reserved to reject any and all bids.
S. MYERS,
Clerk County Court,
Wetzel County, W. Va.

Paving

Tampa, Fla., June 8, 1914.

Sealed proposals will be received at the office of the County Commissioners of Hillsborough County, Florida, until 10 A. M. July 10, 1914, for furnishing paving brick or blocks, wood or granite curb, doing the necessary hauling, grading and laying the curbing and blocks upon the Tampa Plant City Road in said county. Plans and specifications can be seen at the office of the Engineer of Roads. Bidders should personally examine the location of the proposed work and acquaint themselves with all attending conditions. The Road Engineer will furnish bidders with blank forms of proposals; no proposal will be considered unless submitted on such forms. All proposals must be accompanied by certified check, made payable to the Board of County Commissioners of Hillsborough County, for one (1%) per cent. of the amount of their bid. The quantities are approximately only: 77,000 sq. yds. of brick pavement, of No. 1 brick, 9" wide; Or 128,000 sq. yds. of brick pavement, of No. 2 brick, 15" wide. 154,294 lin. ft. of granite or wood curb. The right is reserved to reject any or all bids. Address all bids to the Clerk of the County Commissioners, Mr. W. P. Culbreth, Tampa, Fla., plainly marking the same "Bids for the furnishing of material and construction of a brick road between Tampa and Plant City, for Hillsborough County." For further information apply to James Riddle, Engineer of Roads, Hillsborough County, Tampa, Florida.

Improved Highways

NOTICE TO CONTRACTORS.

Newton, Miss.

Sealed bids will be received until 12 o'clock noon July 13 by the Highway Commission of District Number Four, Newton County, Mississippi, at Newton, Mississippi, on twenty-two and eleven one-hundredths miles of improved highways (excepting bridges costing over \$25), which will be let later by Board of Supervisors. Highways to be divided into two sections—first, seven and eight-tenths miles; second, fourteen and thirty-one-one-

hundredths miles—to be let by the section or as a whole. Bids shall be on unit basis for the following classes of highways, to wit: Concrete, Macadam, Gravel and Sand-Clay. Plans, profiles and specifications now on file in office of Commission, and B. S. Snowden, engineer, Newton, Mississippi. Copy of specifications and bidders' blanks will be furnished upon application to the Commission and receipt of two dollars. All bids shall be made on these blanks. Each bid shall be accompanied by a certified unconditional check for \$3000, payable to Highway Commission, insuring contractor entering into contract and bond within fourteen days after award. Contractor will be required to make bond in the sum of the aggregate contract price plus 10 per cent. The right to reject any and all bids expressly reserved by the Commission.

J. R. BYRD,
J. C. BUCKLEY,
A. L. MONROE,
Commissioners.

B. S. SNOWDEN, Chief Engineer.

State Highway

STATE OF MARYLAND,
STATE ROADS COMMISSION,
601 Garrett Building,
Baltimore, Md.

NOTICE TO CONTRACTORS.

Sealed proposals for building 7 sections of State Highway, aggregating about 26.62 miles in length, as follows:

Contract No. A-10—ALLEGANY COUNTY: One section of road from Green Ridge to Washington county line, about 7.88 miles in length. (Resurfacing.)

Contract No. A-11: One section of road from near Cumberland to Nave's Farm Road, about 1.74 miles in length. (Resurfacing.)

Contract No. A-14—ANNE ARUNDEL COUNTY: One section of road from Birds-ville to South River, about 4.55 miles in length. (Gravel.)

Contract No. 0246—FREDERICK COUNTY: One section of road through Middletown, about 1.36 miles in length. (Macadam or Concrete.)

Contract No. G-8—GARRETT COUNTY: One section of road through Grantsville, about .85 mile in length. (Macadam or Resurfacing.)

Contract No. 8. M-8—ST. MARY'S COUNTY: One section of road from St. Mary's City to Ridge, about 6.74 miles in length. (Gravel Surfacing.)

Contract No. T-8—TALBOT COUNTY: One section of road from Easton toward Trappe, about 3.50 miles in length. (Macadam or Concrete.)

Will be received by the State Roads Commission at its office, 601 Garrett Building, Baltimore, Md., until 12 M. on the 14th day of July, 1914, at which time and place they will be publicly opened and read.

Bids must be made upon the blank form contained in the book of specifications. Specifications and plans will be furnished by the Commission upon application and cash payment of \$1 for each contract, as hereafter no charges will be permitted.

No bid will be received unless accompanied by a certified check for the sum of five hundred (\$500) dollars, payable to the State Roads Commission.

The successful bidder will be required to give bond and comply with the Acts of the General Assembly of Maryland respecting contracts.

The Commission reserves the right to reject any and all bids.

By order of the State Roads Commission, this 26th day of June, 1914.

O. E. WELLER,
Chairman.

WM. L. MARCY,
Secretary.

Paving

NOTICE TO BIDDERS.

Decatur, Ala.

The Mayor and Council of the City of Decatur, Ala., will receive sealed bids until 8 o'clock P. M. Tuesday, July 21, 1914, for furnishing material for and constructing all work called for under the following Improvement Ordinances:

Improvement Ordinance No. 49, Series "C" cement sidewalks; Improvement Ordinance No. 50, Series "C" Improvement Ordinance No. 51, Series "C" Improvement Ordinance No. 52, Series "C" Improvement Ordinance No. 53, Series "C" and Improvement Ordinance No. 54, Series "C" asphalt macadam pavement, cement curbs and gutters; Improvement Ordinance No. 55, Series "C" asphalt macadam pavement, Tishomingo gravel pavement, cement curbs and gutters; Improvement Ordinance No. 56, Series "C" Improvement Ordinance No. 57, Series "C" Improvement Ordinance No. 58, Series "C" and Improvement Ordinance No. 60, Series "C" Tishomingo gravel pavement, cement curbs and gutters.

Bids may be made on one or as many ordinances as the bidders may elect, but separate bids must be made for each ordinance.

Certified checks amounting to \$500 for each ordinance bid on must accompany bids. Plans, specifications and profiles are now on file in the City Engineer's office, Decatur, Ala.

The right is reserved to reject any or all bids.

P. J. EDWARDS, Mayor.
E. W. COLLIER, City Clerk.

PROPOSALS

SEWERS

WATER-WORKS

ELECTRIC LIGHT PLANTS

BRIDGES

Paving

Sealed proposals will be received at the office of the Easton Street Improvement Commission of the Town of Easton, Maryland, at eight o'clock P. M. of the sixth day of July, 1914, at which time and place the proposals will be publicly opened and read. The work to be done consists of grading and paving certain streets in the Town of Easton, Maryland, comprising about 20,000 square yards of pavements.

Contract, specifications and blank forms of proposal may be obtained at the office of the Commission or at the office of the Chief Engineer, Easton, Md. Plans may be obtained upon the payment of Five Dollars (\$5) for each set.

Each proposal submitted for the work must be accompanied by a certified check drawn upon a national or State bank or trust company and to the order of the Street Improvement Commission of the Town of Easton for the sum of One Thousand Dollars (\$1000).

The Commission reserves the right to reject any or all bids.

WM. E. SHANNAHAN,
President,
Easton Street Improvement Commission,
Easton, Maryland.
E. G. KASTENHUBER, JR.,
Chief Engineer, Easton, Md.

WATERWORKS AND SEWERS

Sewers

Daytona, Florida, June 8, 1914.

Sealed bids or proposals will be received by the Board of Public Works of the City of Daytona at the City Hall until 3 P. M. Wednesday, July 15, 1914. The principal items as shown by the Engineers' estimate are as follows:

21 miles of 8 to 24-inch vitrified pipe.
430 tons of cast-iron pipe.
16,000 lineal feet of 2-inch galvanized-iron pipe.

Furnishing two 50 H. P. oil engines and appurtenances.

Furnishing three centrifugal pumps and appurtenances.

Furnishing air compressors and appurtenances.

Furnishing Rensch sewage screen.

Furnishing and installing sterilizing outfit.

Installing machinery in sewage pumping station.

Substructure for pumping station and superstructure.

Furnishing and installing 7 sewage ejectors.

Pipe-laying contract consisting of about 21 miles of vitrified pipe, 400 flush tanks and manholes, 3 miles of cast-iron pipe, 4000 lineal feet of 30-inch reinforced concrete pipe, 10,000 cubic yards of excavation, and other items.

Bids must be accompanied by a satisfactory check for five per cent. of the amount of the bid. All bids must be made on blank forms furnished by city. Plans and specifications may be seen at the office of the City Clerk of Daytona, Florida, or at the office of Geo. W. Fuller, Consulting Engineer, 170 Broadway, New York City, or at the office of C. M. Rogers, Engineer, Daytona, Florida. Specifications will be forwarded by the Engineer upon the receipt of two dollars, plans upon the receipt of one dollar, and profiles upon the receipt of two dollars. The right is reserved to reject any or all bids.

BOARD OF PUBLIC WORKS.

JOS. OSBORNE, Chairman.

E. M. CONDIT, Secretary.

Water-Works System

Daytona Beach, Fla.

Sealed proposals will be received by the Mayor and Council of Daytona Beach, Fla., at the office of the Mayor, until 7 P. M. July 11, 1914, for the construction of a water-works system, at which time they will be opened and read publicly. The work includes the furnishing of all labor, material and machinery and equipment of every kind necessary to construct the water-works system according to plans and specifications. The approximate quantities are as follows:

25 or 40 H. P. oil engines direct connected to 2 500-gallon-per-minute double-acting triplex pumps.

1 50,000-gallon steel tank on 85-foot tower, with riser pipe, expansion joint, balcony, ladder, etc.

1600 feet 8" C. I. Class "B" pipe.

500 feet 10" C. I. Class "B" pipe.

8910 feet 6" C. I. Class "B" pipe.

3885 feet 4" C. I. Class "B" pipe.

7075 feet 2" Galv. pipe with fittings.

2600 feet 1 1/2" Galv. pipe with fittings.

Special castings.

23 double fire hydrants.

1 10" gate valve and box.

7 6" gate valves and boxes.

5 4" gate valves and boxes.

2 2" gate valves and boxes.

5 1 1/2" gate valves and boxes.

Each bid must be accompanied by a certified check on a national bank for 5 per cent. of the amount bid, drawn to the order of U. S. Shelley, Mayor, Daytona Beach, Fla.

Plans and specifications may be seen at the office of the Clerk or the Engineers. Bidding blanks may be obtained from the Mayor. Copies of plans and specifications may be obtained from the Clerk at \$3 per set to cover their actual cost.

The right is reserved to reject any and all bids.

U. S. SHELLEY, Mayor.
HARRY A. HORN, Clerk.
THE J. B. McCRAE CO., Engineers,
1408-1417 Third Natl. Bank Bldg.,
Atlanta, Ga.

Proposals for Sanitary Sewer

Baton Rouge, La.

Sealed proposals will be received by the Mayor and Commission Council of the City of Baton Rouge until 12 o'clock noon, August 1, 1914, for furnishing all material and doing all work necessary for the complete construction of about thirty-six thousand (36,000) lineal feet of vitrified pipe sewers from six (6) to twelve (12) inch diameter, together with necessary cast-iron pipes, flush tanks, manholes and other appurtenances.

Specifications, forms of proposals, etc., may be obtained and plans seen at the office of the City Engineer, City Hall, Baton Rouge, La., after the 10th day of July, 1914. Plans and profiles may be obtained after the date just mentioned by making a deposit of five dollars (\$5), returnable upon receipt of the plans in good condition at the City Engineer's office, City of Baton Rouge. Certified check for one thousand dollars (\$1000) is to accompany each bid. All checks to be drawn in favor of the City of Baton Rouge, Louisiana.

The right to reject any or all bids or parts of bids is hereby reserved.

Address all communications to the City Engineer.

JOHN J. MUNDINGER,
City Engineer.

Water-Works Station, Filters, Machinery and Extension

La Grange, Georgia.

Proposals will be received by the undersigned until 2 P. M., July 21, 1914.

The work will include supplying all materials and labor necessary to construct water-works, with all appurtenances, including filters, two brick stations, reinforced concrete, coagulating and clear water basin, transmission line and electric pumping machinery.

Drawings and details may be examined and blank form of specifications and bid sheet be obtained of T. J. Harwell, City Clerk, or the Consulting Engineer, Atlanta, Georgia.

A deposit of ten (\$10) dollars will be required for each set of plans, which will be refunded on the return of the plans in good condition.

Each proposal must be accompanied by a certified check in the sum of five (5) per cent. of the amount bid as evidence of good faith upon the part of the bidder.

The City reserves the right to reject any and all bids, or, waiving formalities, to accept any which may seem to it to be the best for the City of La Grange.

J. D. EDMUNDSON, Mayor,
La Grange, Ga.

JAMES NISBET HAZLEHURST,
Consulting Engineer,
Atlanta, Ga.

Storm and Sanitary Sewer Construction

San Antonio, Texas, June 10, 1914.

Sealed bids will be received by the undersigned until 4 P. M. July 6, 1914, for the construction of Storm and Sanitary Sewers for the City of San Antonio, sizes and quantities being approximately as follows, to wit:

Storm Sewers.

7070 feet of 76" sewers.

630 feet of 74" sewers.

742 feet of 72" sewers.

1840 feet of 68" sewers.

980 feet of 64" sewers.

2380 feet of 60" sewers.

940 feet of 58" sewers.

950 feet of 54" sewers.

470 feet of 52" sewers.

380 feet of 50" sewers.

1030 feet of 44" sewers.

1340 feet of 42" sewers.

6735 feet of 36" sewers.

And smaller.

For the above alternate bids on molded reinforced concrete, monolithic concrete, vitrified liners, and vitrified segmental blocks will be considered.

Sanitary Sewers.

650 feet of 58" sewers.

3330 feet of 46" sewers.

750 feet of 44" sewers.

1060 feet of 38" sewers.

6040 feet of 36" sewers.

2735 feet of 30" sewers.

2095 feet of 24" sewers.

8440 feet of 20" sewers.

3330 feet of 18" sewers.

2865 feet of 15" sewers.

5060 feet smaller sizes.

For all sizes over 24" alternate bids on vitrified pipe, vitrified segmental, block concrete, vitrified segmental liner, molded reinforced concrete, and monolithic concrete will be considered.

For specifications, bidders' blanks and other information address Hans Hellans, City Engineer.

FRED FRIES,
City Clerk, City of San Antonio

BUILDINGS

Y. M. C. A. Building

Sealed bids on the construction of the Y. M. C. A. Building of Tulsa, Oklahoma, will be received at the office of the Y. M. C. A., 412 Clinton Building, up to 10 A. M. July 28, 1914.

Four-story-and-basement building, fireproof, 90x130 feet. Drawings and specifications may be had from the Architects, Shattuck & Hussey, 19 South La Salle Street, Chicago, Ill., or Y. M. C. A. Office, Tulsa.

Building

Greenville, N. C.

Sealed proposals will be received by the Board of County Commissioners, Greenville, N. C., until noon July 8, 1914, for the erection and completion of a brick and stone County Home building, to be located one mile north of Greenville, near Atlantic Coast Line Railroad, with siding.

All proposals must be accompanied by a certified check of 2 1/2 per cent. of the amount of bid.

Plans and specifications may be seen at the County Clerk's office, Greenville, N. C., or obtained from the Architects, Benton & Moore, Wilson, N. C., upon the deposit of \$10, which will be refunded on the return of plans in good condition.

MISCELLANEOUS

Furniture and Fixtures for Madison County Courthouse

Madison, Fla.

Sealed proposals will be received by the undersigned until 10 o'clock A. M. the 15th day of July, 1914, to sell to the County of Madison furniture and fixtures for the new Courthouse.

List of same can be had from the Clerk of the Board of County Commissioners. This the 3d day of June, 1914.

D. F. BURNETT, JR.,
Clerk of the Board.

Garbage Incinerator

Clarksdale, Miss.

On Thursday, July 23, 1914, the Commissioners of the City of Clarksdale, Miss., will open sealed proposals for building a crematory or garbage incinerator to serve a population of about 6000.

Each bidder will furnish his plans and specifications with his bid, accompanied by a certified check or bidder's bond for \$200, payable to the City of Clarksdale.

Address bids to M. W. Purnell, City Clerk.

M. J. BOULDIN,
Mayor.

Culverts

NOTICE TO MANUFACTURERS.

Newton, Miss.

Sealed bids will be received July 13, 1914, for all necessary culvert piping to be used in the construction of improved highways of District Number Four of Newton County, Mississippi, by Highway Commission of above District until 12 o'clock M. of said date. Bids to be for pipe per lineal foot F. O. B. cars at any depot in said District designated by the Commission. Unconditional certified check for \$500 shall accompany each bid to guarantee same as being bona fide. The Commission expressly reserves the right to reject any and all bids.

J. R. BYRD,
J. C. BUCKLEY,
A. L. MONROE,
Commissioners.

B. S. SNOWDEN, Chief Engineer.

Materials

Killeen, Texas.

Bids will be received by the Mayor and City Council of Killeen, Texas, and publicly opened on the 13th day of July, 1914, for the purchase by said city of—

1500 feet of 8" cast-iron pipe.

550 feet of 6" cast-iron pipe.

8000 feet of 4" cast-iron pipe.

4 8" gate valves.

1 6" gate valve.

9 4" gate valves.

20 fire hydrants.

1 motor-driven deep-well pump.

Complete list of material requirements can be had by addressing M. Griffin O'Neil & Sons, Praetorian Building, Dallas, Texas.

Dredging

NOTICE TO CONTRACTORS.

New Orleans, La.

Sealed proposals will be received by the Board of Commissioners of the Port of New Orleans, La., at their offices, Suite 200 New Orleans Court Building, until July 20, 1914, at 8 o'clock P. M., and then publicly opened, for dredging in the Mississippi River, filling and clearing site for cotton warehouses and terminal facilities between Mississippi River and Leake avenue and between Napoleon avenue and Soniat street, New Orleans, La.

Estimated amount of filling, 2,000,000 cubic yards.

Estimated amount of clearing, 90 acres.

Deposit: Five thousand (\$5000) dollars cash or certified check.

Payments: Monthly.

Bond: One-half estimated amount of contract.

Plans and specifications are on file at the office of Ford, Bacon & Davis, Engineers, 921 Canal street, New Orleans, by whom full sets will be furnished on deposit of ten (\$10) dollars. Said deposit will be refunded upon the return of said set in good condition.

The right is reserved to reject any and all bids.

ERNEST M. LOEB,
President.

Pumps, Turbines, Boilers, Etc.

NOTICE TO MANUFACTURERS.

The San Antonio Water Supply Company of San Antonio, Texas, will receive bids up to August 3 for two five-million-gallon pumps and steam turbines, condensers and accessories; three 250-horse-power boilers and accessories. Specifications may be obtained by addressing

ROBERT J. HARDING,
Chief Engineer, San Antonio Water Supply Co., San Antonio, Texas.

Power Plant Equipment

Sealed proposals, addressed to the Mayor and Board of Town Commissioners of Scotland Neck, N. C., will be received at the Mayor's office at Scotland Neck up to 12 o'clock noon on Thursday, the 23d of July, 1914, for furnishing the following:

One 400-horse-power 300 R. P. M. Steam Engine.

One 250 K. W. Engine Type 2300-volt Alternator with Exciter and Switchboard.

One 250 H. P. Water-Tube Boiler, erected.

No other apparatus to be considered at this time, but separate tenders will be received on the several items.

Proposal forms and further information may be obtained from the Engineer at Durham, N. C.

Proposals will be opened in the presence of those interested, but the Board reserves the right to reject any and all bids.

By order of the Board.

L. R. MILLS, JR., Supt.,
Scotland Neck, N. C.

Engineer,
WM. M. PLATT,
Durham, N. C.

Pumping Station and Equipment

NOTICE TO BIDDERS.

Memphis, Tenn., June 15, 1914.

Sealed proposals will be received up to 12 o'clock noon Tuesday, July 14, 1914, at the office of C. C. Pashey, City Clerk, for furnishing all labor, tools, hauling for and materials necessary for erecting a building to be used as a

PUMPING STATION.

The work will embrace excavation for foundation, driving foundation piles and erecting a concrete and brick building approximately 60 ft. wide by 100 ft. long and 90 ft. high from the bottom of the foundation concrete to the top of the roof.

The lower one-half of the building will be of concrete, with a reinforced concrete floor to carry the pumping machinery; the upper one-half will be of brick, with steel truss roof.

There will also be included in the construction a discharge basin approximately 25 ft. wide by 130 ft. long, 350 ft. of horse-shoe-shaped culvert 15 ft. by 25 ft., and a suction basin.

A certified check in the sum of Five Thousand Dollars (\$5000), deposited in accordance with the terms of the specifications, will be required of each bidder.

ELECTRICAL MACHINERY.

Sealed bids will be received up to 12 o'clock noon Tuesday, July 14, 1914, for furnishing and erecting the following electrical machinery and auxiliaries:

Four (4) 750 H. P. Wound Rotor, Induction Motors, with horizontal shaft.

Two (2) 300 H. P. Wound Rotor, Induction Motors, with vertical shaft.

One (1) Complete Switchboard for the control of the above motors, with all wiring connections.

Three (3) 667 K. V. A. Single-Phase Transformers.

Other Auxiliaries.

A certified check in the sum of Twenty-five Hundred Dollars (\$2500), deposited in accordance with the terms of the specifications, will be required of each bidder.

PUMPING MACHINERY.

Sealed proposals will be received up to 12 o'clock noon Tuesday, July 14, 1914, for furnishing and erecting the following machinery and auxiliaries:

Four (4) Double Suction, Horizontal Shaft, Centrifugal Pumps, capacity each 300 cu. ft. per second against a normal head of fifteen feet.

Two (2) Vertical Shaft, Single Suction, Centrifugal Pumps, capacity each 90 cu. ft. per second against a normal head of twenty-two feet.

Complete suction and discharge pipes for above pumps.

One (1) Twenty (20) Ton Motor Hoist Hand-Operated Traveling Crane.

Two (2) Vertical Shaft Pit Pumps.

Two (2) Rotary, Motor-driven Vacuum Pumps of 400 cu. ft. per minute capacity each.

Together with necessary piping and valves.

A certified check in the sum of Twenty-five Hundred Dollars (\$2500), deposited in accordance with the terms of these specifications, will be required of each bidder.

The contract for electrical machinery, the contract for the pumping machinery and the contract for the building will be let separately, each as a whole.

Plans and specifications may be had from J. H. Weatherford, City Engineer, Room 5, Court House, Memphis, Tenn.

A deposit of Fifty Dollars (\$50) will be required on each set of plans and specifications, which will be refunded on the surrender of the same.

By order of the Board of Commissioners of the City of Memphis.

E. H. CRUMP, Mayor.

Attest: C. C. PASHEY, City Clerk.

INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers whether they are advertisers or subscribers or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

A Prosperous Cement Co.

The Dixie Portland Cement Co. of Chattanooga, Tenn., has declared its usual 3 1/2 per cent. semi-annual dividend on its preferred stock. Representatives of the company recently held a meeting at Chattanooga, and at that time business conditions for the last six months were reported as highly satisfactory.

Texas Southern Electric Co.

E. M. Schofield, president of the Schofield Engineering Co., Philadelphia, Pa., has been appointed vice-president of the Texas Southern Electric Co., with properties at Cuero, Beeville, Bishop, Kingsville and Victoria. The company is financed by Warner, Tucker & Co. of Boston, Mass., owning and operating public utilities in Southern Texas.

James T. Gardner, Inc.

The locomotive, car and railway equipment business, including used equipment of the late James T. Gardner, will continue under the name of James T. Gardner, Inc. The officers of the company are M. Gardner, president; R. H. Gardner, vice-president; A. V. Talbot, secretary, and A. M. Talbot, treasurer. The address of the company is 615 Railway Exchange, Chicago, Ill.

Contract for Limestone and Silica Plant Equipment.

The contract for the limestone and silica plant of the Arkansas Lime Co., at Ruddles, Ark., has been secured by George F. Smith, 810 N. Main St., St. Louis, Mo. The cost of the equipment is estimated at \$25,000 and will be wanted for installation late in July. Further information regarding the contract and machinery to be installed may be obtained by addressing George F. Smith.

American Hoist & Derrick Co.'s Seattle Branch.

The Seattle (Wash.) office of the American Hoist & Derrick Co. of St. Paul, Minn., has been moved from its former location to the L. C. Smith Bldg., Seattle. The company maintains at its Seattle branch a full line of hoisting machinery and repair parts and renders full service in its lines of equipment to Pacific Coast customers. Mr. F. R. Schoen, who has long been connected with the hoisting machinery business, has charge of the Seattle branch.

Robbins & Myers Co. Increasing Facilities.

To give greater facilities for handling increasing business, the Philadelphia offices of the Robbins & Myers Co. of Springfield, O., have been removed to 606-608 Bellevue Court Bldg., 1415 Walnut St. The company also announces that work has begun on the construction of a new factory building adjoining its present plant to take care of its growing output. The building will be of reinforced concrete construction, 60x225 feet, four stories high and basement.

New Electric Light and Water Plant.

Consulting Engineer C. O. Pinch of Lakeland, Fla., has recently completed the construction of the new electric light and water plant at Lake Worth, Fla., which has been put into operation after successful tests. The equipment consists of a De La Vergne crude oil engine of the De La Vergne Machine Co., foot of East 138th St., New York, driving a 2300-volt generator of the Western Electric Co., 463 West St., New York. Water pumps are driven direct from the crude oil engines and pump into a tank of 100,000 gallons capacity. Cast-iron pipe is used in the water distribution, and the electric distribution is made by stepping down the 2300-volt current to 110 volts.

C. B. Davis Engineering Co.

The C. B. Davis Engineering Co., sales agent, is carrying on a machinery business in Birmingham, Ala., with offices in the Brown-Marx Bldg. The company represents the following manufacturers: Industrial Works of Bay City, Mich., builders of locomotive cranes, wrecking cranes, pile drivers, etc.; the Lidgerwood Manufacturing Co., 36 Liberty St., New York, builder of steam and electric hoists, derricks, excavating machin-

ery, etc.; the Aldrich Pump Co., Allentown, Pa., builder of power-driven pumps, and the Bay City (Mich.) Dredge Works, builders of dredges and other similar equipment.

New Hoop-Shaving Machine.

A hoop-shaving machine which has been tested out and is said to be a complete success has been developed by Henry P. Richardson, and is now in use by I. N. Wilcoxson at Loretto, Tenn., where it is found that it will shave to the table 4000 white oak or hickory hoops per day. It is stated that a bundle of hoops made with this machine will weigh 20 pounds less than when made with knife by hand, and that short crooks and knots in the material do not interfere with the work. A 10 H. P. engine will operate the machine. Persons interested in the handling or manufacture of such hoops may obtain further information by addressing I. N. Wilcoxson, R. F. D. No. 2, Loretto, Tenn.

Incorporation of Southern Gas Co.

The Southern Gas Co. of Birmingham, Ala., was recently incorporated by the Scott Investment Co., W. H. Harrison, Jr., Lewis Pizitz, John M. Corr and Lee McGriff of Birmingham and John R. Cochran of Chicago, Ill. The capitalization of the company is \$300,000, with \$200,000 paid in. The company's headquarters are located in the Brown-Marx Bldg., Birmingham, Ala., with Charles H. Scott, president; John M. Corr, vice-president, and W. H. Harrison, Jr., secretary and general manager. The first plant to be owned and operated by the company is at Waycross, Ga. The main building of the Waycross plant is practically completed and materials have been pushed, and it is expected that gas will be produced within three months.

Electric Vehicle Association Convention.

An exhibit of electric vehicles, batteries and accessories will form one of the interesting features of the fifth annual convention of the Electric Vehicle Association, which will be held in Philadelphia, Pa., October 19-21, inclusive. It will form a special section of the Philadelphia Electrical Show, which will continue from October 19-24. It is expected that this exhibit will be one of the most comprehensive and instructive that has yet been presented of the new developments in electric vehicle manufacture and distribution. Full information regarding the convention and exhibit may be obtained by addressing the executive secretary of the Electric Vehicle Association, 29 W. 39th St., New York.

Contracts Awarded for Dams.

The Hydro-Electric Power Commission of Ontario, Canada, has awarded a contract to the Ambursen Hydraulic Construction Co. of Montreal, Canada, for the construction of a large dam at Eugenia Falls, on the Beaver River, about 40 miles from Owen's Sound, Ontario. The total length of the dam is 1965 feet, of which 105 feet is spillway, 1150 feet bulkhead and 700 feet core wall, with the crest of the spillway 45 feet above foundations. A wooden penstock 5000 feet long, with concrete intake, gives an effective working head of 500 feet. The Ambursen Company, 61 Broadway, New York, has also received a contract from William Crabtree & Sons, manufacturers of worsted yarns at Montgomery, N. Y., for the construction of a dam 10 feet high and 240 feet long.

Big Output of Oak Lumber and Flooring.

The Arkansas Short Leaf Lumber Co., Pine Bluff, Ark., reports that since its hardwood sawmill was completed in 1913 it has been turning out large quantities of the finest quality of white oak, the timber being obtained from the Saline River bottom lands. In connection with the mill, its oak flooring factory is producing 500,000 feet of Forked Leaf Brand oak flooring per month. The hardwood department is operated by the Saline River Hardwood Co., a subsidiary of the Arkansas Short Leaf Lumber Co. The officers of the company are R. A. Long,

chairman of the board; C. B. Sweet, president; M. B. Nelson, treasurer, and F. J. Bannister, vice-president and secretary, all of Kansas City, Mo., and J. M. Sowards, general manager, Pine Bluff, Ark.

Link-Belt Car Unloader.

An economical machine to replace hand labor and to save time in unloading cars of coal, sand, ore and other similar material has been designed and is manufactured by the Link-Belt Co. of Philadelphia, Pa., and Chicago, Ill. This equipment is designed to meet the demands of contractors and is operated by a gasoline engine, the entire outfit being simple in operation. It can be dismantled and set up again at another point, and thus can be used wherever needed on short notice. In construction bucket-elevators are so arranged that they may be lowered into a car and raise the material to a telescopic spout which feeds directly into wagons or carts. The action is continuous, and thus a large capacity is obtained. Full information regarding the unloader may be obtained by addressing the company.

The Automatic Flagman.

A signal device, protecting railway grade crossings by giving effective warning of the approach of trains, has been designed and is manufactured by the Automatic Flagman Co., Los Angeles, Cal. It has been demonstrated on the Pacific Electric Railway of Los Angeles, and it is stated that several hundred of them are used on that line. The "automatic flagman" is operated by means of the energy supplied by a small electric motor manufactured by the Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa., which rings the gong and waves a disc on the approach of trains on the road. The train, on entering the signal block, completes the circuit, operates a relay and connects the motor with a power circuit. When the train leaves the block the circuit is opened and the motor disconnected, so that the crossing is thus protected by the signal when a train is approaching.

Fireproof Construction With Concrete.

Mr. J. P. Beck, publicity manager of the Universal Portland Cement Co., Chicago, Ill., was awarded the \$1000 first prize for the best constructive essay on advertising by the awards committee of the Associated Advertising Clubs of America at the Toronto convention recently held. Mr. Beck's essay covered a hypothetical campaign for fireproof construction with concrete, showing the relief offered from fire loss and taxation by safer construction with that material. Mr. Beck has been associated with the Universal Portland Cement Co. as publicity manager for a number of years. He is widely known in the cement industry as general manager of the Cement Products Exhibition Co., under whose auspices the annual cement shows are held. Mr. Beck is also secretary and treasurer of the first national conference on concrete road building. He thus maintains close touch with the great movements of the cement industry.

Activity in Oil Mill Machinery.

Activity in the oil mill machinery industry is reported by the American Machine & Manufacturing Co. of Greenville, S. C., and the company states its plant is in operation day and night to keep pace with the volume of business. A recent contract, making the sixth the company has received this season for complete oil mill equipment, is for the design and equipment of a modern four-press oil mill to be erected at Macon, Ga., for Joel Hurt of Atlanta and W. M. Hutchinson. The plant is designed with a view to later increasing to six-press capacity and will embody every improvement. All seed cleaning, hulling, separating and pressroom machinery used will be constructed by the American Machine & Manufacturing Co., with lifting, power and transmission machinery to be the best obtainable. The company has also received a number of orders for its modern drum seed cleaners, self-setting knife hullers, automatic variable stroke hydraulic power pumps, Cooker drain pumps and other machines.

Activity in Building Operations of Consolidated Engineering Co.

In the rapid development of the work of the Consolidated Engineering Co., Calvert Bldg., Baltimore, Md., a number of branches have been established in the South. Among these the Birmingham (Ala.) branch is under the management of Russell Hunter, 513 N. 20th St.; the Atlanta (Ga.) branch is under the management of George W. Weller, with offices in the Healey Bldg., and the Richmond (Va.) branch is managed by Wm.

H. Campbell, Mutual Bldg. Other branches are located at Memphis and at Springfield, Tenn., where important contracts are being carried out. Among the Birmingham branch contracts is the roundhouse for the Southern Railway at Birmingham, costing approximately \$75,000. The Atlanta branch is carrying out a contract for building a tobacco warehouse for Burton Bros. at Winston-Salem, N. C., to cost \$35,000. Other important contracts in hand are U. S. postoffice at Springfield, Tenn., costing \$60,000; a group of buildings for the Water Department of Baltimore city, \$210,000, and varnish and color works for James B. MacNeal of Baltimore, \$15,000.

Big Contract for Cast-Iron Tunnel Segments.

The Wheeling Mold & Foundry Co. of Wheeling, W. Va., has been awarded a portion of the contract for cast-iron tunnel segments for the East River tunnels, New York. The portion awarded comprises approximately 35,000 to 37,000 tons. This contract was awarded by the Pittsburgh Contracting Co. and the O'Rourke Engineering & Construction Co., who are the combined builders of these tunnels. The castings are for delivery over a period of approximately two years, and shipment will begin in about three months. The contract was obtained in severe competition with about twenty of the largest and strongest foundries in the country, and due to this keen competition was taken at a very close price. It is stated that the management of the Wheeling Mold & Foundry Co. deemed it wise to accept the award at a low figure in order to keep the plant in operation and to give employment to Wheeling labor at a time when such employment is very much needed. This work will largely be done in the addition built to the foundry during 1912 and 1913, and will not interfere with the regular output. The company has also received the order from the St. Louis (Mo.) Screw Co. for a 9-inch and an 18-inch bar mill complete with rolls and shears.

TRADE LITERATURE.

Gasoline Storage Outfits.

Underground gasoline storage outfits, welded gasoline tanks, garage air tanks and pumps, as manufactured by William B. Seafie & Sons Co., Pittsburgh, Pa., are illustrated and described in a catalogue recently issued by the company. Capacity and dimension tables and price lists, together with views showing correct methods of installation, are included in the catalogue.

Sheet Metal Scale.

A simple and compact sheet metal scale, giving weight per sheet and per bundle and number of sheets per bundle, is being distributed to interested persons by the Portsmouth Steel Co. of Portsmouth, O. It consists of a cardboard cover with inside sliding scale, and by moving the scale to the different gauge numbers weights of sheets, bundles and number of sheets to the bundle are given for gauges from 14 to 30, with lengths from 72 to 120 inches and widths from 24 to 36 inches.

"Crosby" Clips in Concrete Work.

"Crosby" clips, which are used in fastening reinforcement bars, are illustrated and described in "The Crosby Clipper" for May, issued by the American Hoist & Derrick Co., St. Paul, Minn. The pamphlet contains illustrations of "Crosby" clips being used in the construction of reservoirs for the City of Duluth, Minn.; for the Illinois State Hospital at Anna, Ill., and other structures. Other uses to which "Crosby" clips are applicable are indicated by the concrete lighting poles on the Panama Canal, the reinforcement of which is held together by "Crosby" clips.

Sewage Disposal Plants.

The Sanitation Corporation, 50 Church St., New York, has issued bulletin, series G, No. 2, in which the use of the Riensch-Wurl screen is described and other special apparatus manufactured by the company for the clarification and purification of sewage and for the recovery of by-products are described and illustrated. A comprehensive article by Dr. Endris of Hamburg, Germany, on the "Mechanical Treatment of Sewage in Germany" is included in the bulletin. It will be sent to persons interested in the construction of sewage disposal plants on request to the corporation.

Rail-Track Pavers.

The rail-track pavers of various sizes as manufactured by the Marsh-Capron Manufacturing Co., Old Colony Bldg., Chicago, Ill., are illustrated and described in the folder issued by the company. A general

description of how they are made and what they will do is given, together with capacities, weights, dimensions, etc. This folder and catalogues on other concrete mixing machinery manufactured by the company will be sent on request. Agents in the South include John Hyland, Empire Bldg., Atlanta, Ga.; Chas. T. Lehman, Birmingham, Ala.; J. P. Hely, St. Louis, Mo., and the Savannah Supply Co., Savannah, Ga.

Instructions on Oxyacetylene Welding and Cutting.

Much valuable information on the subject of welding and cutting of metals is contained in the cloth-bound book issued by the Vulcan Process Co. of Minneapolis, Minn., and Cincinnati, O. The history of this form of welding is briefly stated, the production of oxygen, acetylene and hydrogen gases is described and illustrations of the equipment are shown. Illustrations are also included of the practical application of the process as used by the Vulcan Process Co. The Vulcan welding automatic acetylene generator and complete welding plant is shown, and directions are given for using the Vulcan equipment.

"Sphinx" Reversible Section Liner.

A descriptive circular on the "Sphinx" reversible section liner, which has just been put on the market, has recently been issued by F. Weber & Co., manufacturers and importers of drawings and engineering supplies and artists' materials, 1125 Chestnut St., Philadelphia, Pa. The "Sphinx" reversible section liner is similar to the old "Sphinx" liner, but it is operated both from left to right and from right to left. The bar is stationary and the arm is rigid. A strong steel spring clutches the carriage firmly to prevent lost motion. The double beveled 7-inch rule of heavy transparent celluloid is another improvement, permitting a clear view of the drawing above the base of the instrument.

Lunkenheimer "Renewo" Valves.

"Renewo" renewable seat, regrounding valves, adapted for high pressure, are illustrated and described in a booklet issued by the Lunkenheimer Company of Cincinnati, O., manufacturers of high-grade engineering specialties. All parts of the valves are renewable, particularly the seat and disc, which are subject to the greatest wear, and are made of a high nickel alloy. Two designs, including inside screw and outside screw and yoke, with both designs made in two patterns with medium for working steam pressure up to 200 pounds and extra heavy for 300 pounds, are shown in the booklet, together with specifications and price lists. Copies of the booklet may be obtained upon request to the company.

Stopping the Water Waste.

The loss of water, especially in locations where meters are not used, has led to various means of reducing the waste. In this connection, a new washerless faucet is made by the H. W. Johns-Manville Co., Madison Ave. and 41st St., New York, to prevent waste at the faucet. This device is fitted with a conical valve bearing directly on a spherical seat. This gives a like contact which makes a tight joint, so it is not necessary to jam the handle in an endeavor to stop leakage. The new faucet should be of interest to hotels, factories and establishments where the water expense is an appreciable item, as well as to householders. It is stated that the washerless faucet is in extensive use abroad and that the American sales are increasing rapidly.

Trinidad Lake Asphalt in Southern Paving.

A booklet on "Good Pavements and Roads in the South," containing views of streets in Southern cities paved with Trinidad and Bermudez Lake asphalts, has recently been issued by the Barber Asphalt Paving Co. of Philadelphia, Pa. Some of the illustrations show the splendid condition of Trinidad sheet asphalt pavements laid 16, 20 and 25 years ago. The booklet also contains a number of views of streets and roads in Southern cities which have been recently paved with Trinidad and Bermudez asphalts, and gives information on bituminous construction and its method of application to highways. A copy of the booklet will be sent to interested persons on request to the company.

Concrete Gun in Construction Work.

With the view of applying the concrete gun to the various forms of construction work with which it has been found advantageous, the Gun-Crete Company, Chicago, Ill., has opened offices in the McCormick Building, and specializes in cement gun work for engineering and industrial structures and mining uses. These applications include

steel protection work, waterproofing and fireproofing by the cement gun process, and the lining of reservoirs, tunnels, etc. The president of the Gun-Crete Company is Carl Weber, the inventor of the Weber reinforced concrete chimney and designer of a large number of other engineering structures. He has been connected with the cement gun operations for some time. He has recently issued a pamphlet on "The Cement Gun and Its Work," in which the various uses and advantages of the cement gun are stated and the results of comparative tests are shown. This pamphlet and other information regarding cement gun work will be sent to interested persons on request to the company.

Smith "Hot" Mixers for Asphaltic Concrete.

An illustrated folder, describing Smith "Hot" mixers, has recently been issued by the T. L. Smith Co. of Milwaukee, Wis. The Smith "Hot" mixer consists of the standard side-loading Smith mixer mounted on a truck with steam engine and boiler. The capacity of the boiler is increased and a steam blower added to force the hot air and gas from the boiler fire-box through the asbestos-lined heating pipe to the discharge end of the mixing drum. A tar tank is mounted on the loading skip. By taking off the heating pipe and adding a water tank the Smith "Hot" mixer is readily converted into a standard concrete mixer. It is stated that the machine has proven successful for patching purposes and important saving has been effected by remelting the old tar macadam or asphaltic concrete, and after adding a small amount of new bitumen relaying the resulting mixture. Copies of the folder will be furnished to interested persons on request to the company.

Management of Public Service.

The great increase in public service utilities throughout the country has caused the development of specialists in the management of public service corporations, and in turn the high state of development of such companies is reflected in the increasing efficiency and number of public utilities. The J. G. White Management Corporation, 43 Exchange Place, New York, which has been a leader in such work, has recently issued a pamphlet on "The Management of Public Service." The wide field of its work is described in the pamphlet, and much information regarding the maintenance, financing, engineering and other features of such corporations is included. Among the electric lighting, power, ice, gas, water and electric and steam railroad properties which are managed by the corporation are a number in the South and Southwest, including the Augusta-Aiken Railway & Electric Corporation, Augusta, Ga., and the Southern Utilities Co., with about 20 subsidiary companies located in various cities of the South. The pamphlet will be sent to interested persons on request to the company.

Wyckoff Steam Pipe Covering Catalogue.

Wyckoff wood pipe, machine-made wood-stave pipe for water-works systems, power plants, mill and manufacturing plants, mining and railroad supplies and waterproof patent steam pipe casing for underground and exposed steam and hot water pipes are illustrated and described in the flexible leather-bound catalogue No. 32 on "Wyckoff Wood Pipe," issued by A. Wyckoff & Son Co. of Elmira, N. Y. Wooden pipe of various sizes up to 48 inches inside diameter and pressure of 172 pounds per square inch is manufactured by the company. A comprehensive survey, giving a history of wooden pipe covering and its use and methods of manufacture, with tables showing approximate cost and correct method of laying pipe, is included in the catalogue, together with an appendix containing useful information on atmospheric and water pressures, velocity and friction of liquids in pipes and tables of water pressure at different elevations and other useful information on friction of water in pipe. Southern installations of the company's products have been made at White Sulphur Springs, W. Va.; Clifton Forge, Va.; Burkittsville, Md.; Reidsville, N. C.; Lexington, Va.; Norfolk, Va.; Old Fort, N. C., and other points.

Down Draft System of Smokeless Combustion.

The subjects of smoke prevention, economy of fuel and high efficiency of furnaces are treated in a catalogue on the "Down Draft System of Smokeless Combustion," issued by the Hawley Down Draft Furnace Co., Easton, Pa. The Hawley down draft furnace consists of a water-tube grate, the same as the ordinary grate and on which the fuel is fed, but a short distance under

this grate a second grate is placed on which the spent fuel falls as it burns and as the upper fire is worked. Between these two there is a furnace of very high temperature in which all the fuel, both solid and gaseous, is consumed before passing to the boiler. The upper grate is piped up with the boiler and water circulates through it and the piping. The flames pass downward instead of upward as usual, and the gases distilled from the coal by the heat are burned as they are driven off. The catalogue contains illustrations and descriptive matter on horizontal tubular setting, Helme type of setting, flush front type setting, "Smokonomy" down-draft boiler for small heating plants, Babcock-Wilcox type of setting, with gravity feed, vertical type of setting and internal furnace type of setting with gravity feed. Several pages of testimonials are also included in the catalogue.

Modern Water-Power Development.

The extensive hydro-electrical development of the Northern Ohio Traction & Light Co. of Akron, O., in the Gorge Ravine on the Cuyahoga River is attracting attention on

account of the modern and efficient equipment used and the output produced, and is described in a folder issued by the Trump Manufacturing Co., Springfield, O. The power-house is of a concrete substructure, the superstructure being of brick, with steel-frame roof and corrugated-iron covering. The 100-foot dam is of reinforced concrete, and the penstock is 2700 feet long, 90 inches in diameter, of riveted steel, provided with manhole, air valve, mud sluice and expansion joints for each 1000 feet of length. Two standpipes, together with a valve, prevent damage from water hammer. The generating equipment consists of three units, each being a single-runner Trump type horizontal turbine direct connected to Westinghouse generators of 650 K. W. capacity each, manufactured by the Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa. The special features embodied in the design and manufacture of Trump turbines for this installation are particularly interesting. The company manufactures turbines ranging from heads of 3 to 450 feet. The folder and catalogue illustrating the Trump Manufacturing Co.'s products will be sent on request to the company.

Quality
Is
Economy

Murphy Varnishes are
Satisfactory to the
People who varnish
things for their
Own Use

Do you buy Varnish
for your own Cars
or Boats or Houses,
and shoulder the
Re-Varnishing Bills yourself?

Or; do you put on things
that your Customers use—
the repair bills floating
along blithely to them?

Does this difference
in responsibility for upkeep
make a difference in the quality
of the Varnish you buy?

People who keep their
own Varnishing in repair
soon learn that durability
is an investment.

But; the reputation given
to your finishes
by pleased customers
is an equally good investment.

The Varnish
That Lasts
Longest

Murphy Varnish Company
FRANKLIN MURPHY, President
Associated with Dougall Varnish Company, Limited
Montreal, Canada

NEWARK
AND
CHICAGO

Special Advertisements of General Interest.

RECEIVERS' SALE

OF Valuable Paving Plant

CONSISTING OF LEASEHOLD PROPERTY WITH EXCELLENT WATER-FRONT FACILITIES, NO. 1210 BLOCK STREET, OCCUPYING ENTIRE BLOCK, KNOWN AS THE FILBERT PAVING & CONSTRUCTION COMPANY'S PLANT.

ALSO,

ALL THE CHATTELS, CONSISTING OF LARGE CONCRETE MIXER, 5 AND 10 TON STEAM ROLLERS, HOISTING ENGINE, ORANGE PEEL BUCKET, SAND, STONE, ASPHALT, OFFICE FURNITURE, ETC.

By virtue of a decree of the Circuit Court of Baltimore City, the undersigned Receivers will sell by public auction on the above premises, on Tuesday, July 14, 1914, at 10 o'clock A. M., all that lot of ground and improvements lying in the City of Baltimore and described as follows:

Beginning for the same at the northwest corner of Point and Block streets, thence westerly on Block street about 264 feet 9 inches to Dock street; thence northerly on Dock street about 125 feet 8 inches; thence easterly still binding on Dock street about 261 feet to Point street; thence southerly on Point street about 190 feet 6 inches to place of beginning. Subject to \$600 ground rent.

Improved by a complete asphalt plant, including one 180 H. P. engine with two boilers, underground conveyor, double-track elevated railway, and derrick with engine and boiler, clamshell buckets, pumps, agitators, stables, storage-houses, office building, etc.

Terms of sale for the above property: One-third cash, balance in six and twelve months, or all cash, at the option of the purchaser; deferred payments to bear interest from the day of sale and to be secured to the satisfaction of the receivers. A deposit of \$1000 will be required at time of sale.

Immediately after the sale of the above property we will sell the following chattels:

Large concrete mixer, 10-ton steam roller, 15-ton steam roller, 1 National hoisting engine, lot railroad dump trucks, 5 patent dump wagons, 3 carts, 1 dray, wheelbarrows, 2 75 H. P. boilers, granite crusher, cube mixer, 3 fire wagons, derrick, lot iron tanks, orange peel bucket, lot old and new Belgian blocks, asphalt jams, 1 Foote mixer, stone hand roller, iron hand roller, concrete barrows, concrete gutters, lot granite, lot stone curbing, lanterns, rakes, shovels, brooms, bricks, clamps, screw jacks, asphalt cutters, rammers, gasoline lamps, lot sandstone, lumber, scrap iron, tons of asphalt, scow, lot harness, etc., etc.

Terms of sale for the above chattels: Cash. We will first offer the leasehold property and the various chattels separately and reserve the bid, after which we will offer the leasehold property and all the chattels as a whole. If the bid on the whole (leasehold property and chattels) exceeds the aggregate as offered separately, the entire property will be sold as a whole; otherwise it will be sold separately to those who had been the highest bidders.

HENRY B. WILCOX,
ISAAC S. FILBERT,
JOHN B. A. WHELTLE,

Receivers.

PATTISON & GAHAN, Auctioneers.

Notice! Bankrupt Sale! Prattville Cotton Mills Co. BANKRUPT

The mills, machinery, houses and all property belonging to above named bankrupt will be sold to highest bidder for cash on July 11, 1914, at 11 o'clock A. M., at Prattville, Autauga County, Alabama, about 12,000 spindles, half run by water power and half by steam power; in good condition. Further information apply to

GEORGE STUART
Trustee and Special Master

Turpentine Distillation Plant For Sale

1 Copper Still, 6'x4' 6", with 8" inlet steam coils, steam distributor and attachment, complete.
1 Copper Neck, 15"x8", for Still.
1 Condenser for Still, 175 tubes, 1 1/2"x7", including steel tub, and setting condenser in same per contract.....\$1400
2 Retort Condensers, 175 tubes, 1 1/2"x7" 5" inlet, including steel tubs and setting condensers in same per contract, \$550.....1100
\$2500

COTTON STATE LUMBER CO., Meehan Junction Miss.

COAL TAR FOR SALE

A Bargain

3000 one gallon square labeled and sealed tins of pure Coal Tar for sale at 10c. per tin. f. o. b. Richmond, Va. (Now packed and ready for shipment—17 tins in a barrel.)

American Mfg. & Refining Company
RICHMOND, VA.

Natural Gas Four Cents

for Industries at

HENRIETTA, TEXAS

Domestic Gas 20 cents. Three Railroads, Water, Low Taxes, Healthful. Write HENRIETTA BOOSTER CLUB

USED
MOTOR CARS
AND
TRUCKS

ASK FOR LATEST LIST TODAY

MAR-DEL MOBILE CO.

BALTIMORE, MD.

REFERENCES—BRADSTREET OR DUN.

THE CONTROLLING INTEREST IN AN OLD ESTABLISHED BUSINESS FOR SALE

THE COMMON STOCK EARNED 50% IN 1913

Orders now on the books indicate a better business for 1914.

Owing to ill-health and reluctantly acting upon the urgent advice of his physician, a client has instructed me to offer for immediate sale the controlling interest in a

\$400,000.00

TEXTILE and GARMENT MFG. CORPORATION

This is the largest, most important and best-known concern in this line in the United States. Organized in 1900 with a capital of only \$5000, it has grown to its present proportions of \$400,000 entirely out of earnings, besides paying very large cash dividends to its stockholders.

It has the most perfectly efficient organization in this country. The factory manager, sales manager, and heads of departments are all stockholders who have grown up in the business. They have made the past great success possible and are well equipped to make the future even better, so that the purchasers of this stock can step into a well-managed and very profitable business. This is a rare and unusual opportunity for a man to start his son in a very interesting, clean and profitable industry.

This business has just been appraised and the books audited by one of the best-known public appraisal and auditing companies. This report is open to inspection. The company has always enjoyed the highest commercial rating, and the highest bank and commercial references will be supplied upon request.

Full details upon request. Correspondence solicited and inspection of the plant invited.

T. S. SPRAGUE, Investment Securities,
1802 Ford Building, Detroit, Michigan.

TIMBER LAND FOR SALE

N&W
NRY.W

2400 acres timber land, principally pine and second growth, but of milling size. This tract is situated in Pulaski County, Virginia; fronts on the Norfolk & Western for about three miles. Tract will cut about fifteen hundred feet per acre. Well watered. Switch on property. About 1400 acres of this tract is arable land. Price \$10,000. If interested, write for further particulars, referring to File M-5558.

N&W
NRY.W

VACANT FACTORY BUILDING FOR SALE OR LEASE

In a Virginia city having a population of fifty thousand is a modern factory building, size 140x190 feet, one story, concrete floor, saw-tooth roof; nearly two acres of land; switch. Building well adapted to almost any kind of heavy metal or wood working manufacturing. For full description, price and terms write. Refer to File M-5172.

Full information regarding industrial, mining, agricultural and horticultural opportunities, also stock raising in Virginia and North Carolina, will be furnished by writing F. H. LABAUME, Agr'l and Ind'l Agent, Norfolk & Western Railway Co., Roanoke, Va.

If You Are Interested in the South

You Need the

Manufacturers Record

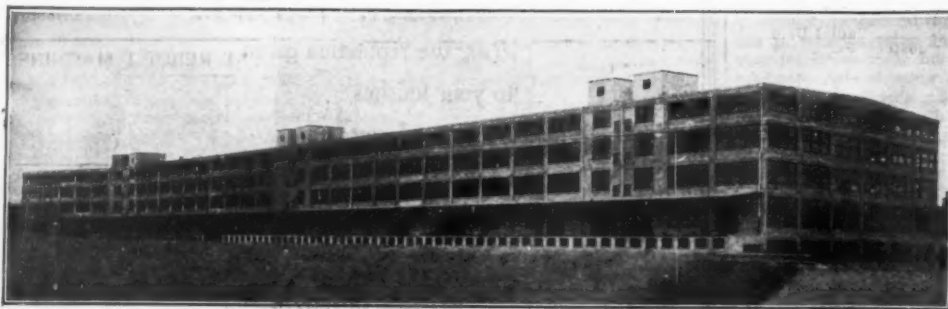
If you are not a regular subscriber and do not receive every issue, you are missing many opportunities to keep closely in touch with the section you are interested in.

Send us your subscription today

\$4.00 for One Year

Less Than 8c. a Week

UNION TERMINAL COMPANY



LOCATED IN THE HEART OF JACKSONVILLE'S SHIPPING SECTION

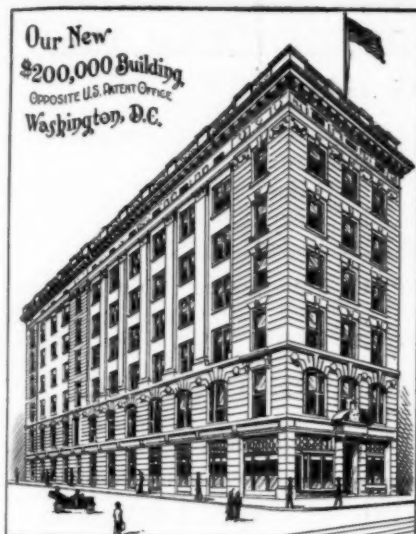
Offers Wholesale Trade and Light Manufacturing Plants Unexcelled Storage and Shipping Facilities.

Rents cheaper than any other building of like character in the United States.

Insurance rate on contents of building 1/4 of 1 per cent.

Five hundred thousand feet of floor space. Fire, Rat, Vermin and Burglar Proof.

Union Terminal Company
Jacksonville, Fla.



Our New
\$200,000 Building
OPPOSITE U.S. PATENT OFFICE
WASHINGTON, D.C.

PATENTS Secured or Fee Returned

Send model or sketch for free report as to patentability. Our four books sent free to any address:

How To Obtain Patent, with one hundred mechanical movements. **What To Invent**, with valuable **List Of Inventions Wanted**. **One Million Dollars Offered for Inventions**. **List of Patent Buyers and Fortunes in Patents**. Patents secured by us advertised

FREE

WANTED NEW IDEAS

Send for LIST OF PATENT BUYERS who consult us when purchasing patents. Contains requests from MANUFACTURERS, MAIL ORDER HOUSES and PROMOTERS for patents secured by us, and suggestions as to New Ideas they wish to purchase. We invite manufacturers and promoters to address our Sales Department regarding the purchase or leasing of a number of meritorious patents secured by us.

VICTOR J. EVANS & CO.

724-726 Ninth Street, WASHINGTON, D. C.

We have recently secured the following patents. A copy of any of these patents will be forwarded upon receipt of ten cents. Address all communications to Sales Dept., Victor J. Evans & Co., Washington, D. C.

Clarence H. Dunlap, charm.
Lloyd N. Messenger, puzzle.
Bruce G. Nelson and George A. Kellogg, collapsible pan.
Richard Seed, game.
Charles P. Burt, fishing reel.
Eddie Burtess, friction clutch for gasoline engine.
Lewis G. Vogt, corn planter.
Fred K. Jolin and Frank M. Browning, device for repairing films.
Charles Gaul, spring tire.
Frederick Gess, door for fire escape.
Herman C. Heffner, insulator holder.
George F. Champion, umbrella stand.
Milton D. Good, arch support.
Henry Hertle, feeding and watering trough.
Ferdinand H. Breacklein, fastening device.
Edward J. Brogan, photographic printing frame.
John H. Keister, angle bar.
Robert W. Jameson and Theo. Miller, vacuum washer.
Pietro Cardarelli Aurelio Mercleri, rail joint.
George L. Rollins, milk bucket and stool.
Ernest L. Tupper, incubator and brooder.
Lee T. Owens, brush holder.
John A. York, lamp burner.
James M. Wardlow, hoe.
Benj. F. Blake, railroad crossing.
Wm. G. Canlon, emergency brake setting apparatus for elevators.
Richard Thalheim, car door.
John M. Tormey, center gage.
Joe Sunseri, window shade and curtain support.

Oscar J. Uphaus, fountain rule.
Anton Rosenquist, sliding door.
Charles Scheer, fireman's mask.
Henry G. Kurtzals, automatic block signal system.
Edgar H. May, carpet cutting and fraying machine.
Francis E. Millner, rack.
James M. McMahon, chimney block.
Luis Murkowski, signal and double-tree attachment.
Asa E. Parmeter, reinforced concrete tie.
Julius E. Pinquely, spring wheel.
Thomas Calmes, foldable cot.
Cleveland J. Archey, wrench.
Victor Bender, automobile number plate.
Wm. W. Emsley, bolt head.
James B. Edwards, grate bar.
Nathan Durbin, rail splice.
Alfred E. Derbyshire, hose coupling.
William Danner, apparatus for the distillation of wood.
John Fersler, cabinet.
Arthur B. Makepeace, post.
Wm. J. Miller, combination tool.
Anthony F. Koerber, candy-pulling machine.
Isaac E. Monroe, well-drilling appliance.
John Turke and Benjamin F. Bell, car door lock.
May A. R. Gilmour, bed spring tightener.
Thomas Herbig, starting device for explosive engine.
Wm. M. Brayley, vending machine.
Arthur Ford, automatic liquid fuel regulators for steam generators.

Francis M. Nolder, combination wrench.
Wm. W. Jones, fuse holder.
Arthur A. Bamford, resilient cycle frame.
Rufus A. Crow, railroad tie.
Moto Arita, collar fastener.
Lyman L. Dennis, egg poacher.
Gottlieb Kalat, tying device.
Otto Niemann, automobile house door.
Robert P. Hill, faucet.
Daniel Hilleman, Jr., coaling device.
Marion M. Roberts, splice for railroad iron.
Ernst Wasen, scarf form.
Samuel C. Wood, spike.
John M. Zwickie, crate.
Charles J. Woodhouse, ice-box scale.
Leonard E. Shane, wrecking bar with hammer attachment.
Leonard Starr, potato cutter.
Joseph M. Spencer, drying and carbonizing machine.
Courtland W. Weaver, faucet.
Henry Newman, gearing.
James C. Mahan, wire fence clamp.
James P. E. Bernier, brake.
Gilbert Cullen, end gate.
John George Knurck, envelope fastener.
Walter E. Kemp, washing machine.
Pablo H. Cordova, protector.
John A. Heckman, ball-bearing car wheel.
Theodore H. Hensley, safety wheel clamp.
Peter Weymann and Guido Ghlitzer, corn planter.
Henry M. McFarlane, rail joint.
Frank W. Robison, sanitary chalk trough screen.
Simon B. Vose, aeroplane.

Frank Thatcher, process of manufacturing alcohol.
Ell O. Anderson, changeable tread for automobiles.
Silverio Tagliamonte, automatic cut-off.
George C. Ludgate, vegetable washer.
Joseph L. Jackson and William Wright, lubricating compositions.
Frank Horsody, syringe.
Lucius R. Anderson, drafting instrument.
Arthur B. Rapine, waxing machine.
Frank R. Hunsell, pruning implement.
Henry R. Palmer, advertising device.
James R. Abbott, wave and tide motor.
Thomas G. Worthington and Herman L. Langstaff, ore feeder.
Giles C. and Samuel Griswold, fence post.
John Placot, insubmersible vessel.
Richard Grant, eye shade.
Hiram B. Debus, undershoes or ice creepers.
Roy A. Driscoll, gate.
Robert and James Ewen, loading device.
Isaac H. Taylor, feed bag adjusting mechanism.
John L. Sibley, end gate.
John R. Stelzer, stern bearing.
Ira C. Terry, automobile tire.
Wm. W. McCoy, shoe fastener.
Paul Martel, loom brake.
Merritt D. Kinsman, splice bar.
George W. Kuhn, automatic pipe line coupling for cars.
Jesse F. James, hose coupling.
Joseph H. Mullaby, matrix mold.
Charles L. Johnson, surgical instrument.
John H. Castana, extractor.

Bargains in Machinery and Supplies.

BOILERS

- (3) 550 H. P. Edge Moor, W. T., practically new.
- (2) 270 H. P. Babcock & Wilcox, 200 lbs. steam.
- (5) 150 H. P. 72"x18" H. R. T. 125 lbs. steam. Will be sold cheap—with or without Wetzel Stokers.

Large stock of Engines, Boilers, Machine Tools and General Machinery. Write for detailed catalogue.

HERMAN L. WINTERER, 908-910 Beach St., Phila., Pa.

25-TON REFRIGERATING MACHINE

For Sale

One 25-ton refrigerating machine, with condensers and complete equipment, in A No. 1 condition. Price \$1500 for quick sale. Reason for selling, putting in a larger machine.

W. H. LUDEN

READING, PA.

Lambert Hoisting Engine

FOR SALE

One 9½"x12 D. C. D. D. Lambert Hoisting Engine, complete with swinging gear, at a bargain.

BYRD BROTHERS, Salisbury, N. C.

What Eight Cents Did

"We saw in this paper about the plant contemplated at Bishop, Texas. We wrote them, and we are very glad to tell you that we have closed with them for an Elevator, Warehouse and very extensive Corn Meal and Chop Plant."

Only an example as to how the Manufacturers Record keeps its subscribers in touch with new business. Do you get the Record every week?

\$4.00 a Year

Less than 8 cents a week

In replacing our manufacturing equipment we find the following first-class

Used Machine Tools

which we offer at attractive prices

- 16"x 6' Reed.
- 17"x 6' Gray.
- 20"x 8' Lodge & Shipley, Q. C. G.
- 20"x10' Lodge & Shipley, Q. C. G.
- 20"x12' Lodge & Shipley, Q. C. G.
- 24"x 8' Lodge & Shipley, Q. C. G.

SPECIAL LATHES

- No. 3 Lodge & Shipley Rapid Reduction Lathe.
- 24"x7' Lodge & Shipley Chucking Lathe.
- 14"x6' Towsley Speed Lathe.
- 2 18"x8' Lodge & Shipley Single Pulley Driven Lathes.

METAL SAWS

Globe Power Hack Saw, 8" capacity

MISSCELLANEOUS MACHINE

- One Marion Double Grinder.
- One Marion Double Grinder on stand.
- One Diamond Disk Grinder on column.
- One Sturtevant Blower, diameter of outlet 25½".
- One "Ohio Planer," 24"x24"x12", with two heads on cross rail.
- Universal Swivel Table for Radial Drill.
- Brown & Sharp Grindstone Frame for 5"x 36" stone.
- One Mueller Grindstone Frame for 4"x27" stone.
- One 12"x40" Mumford Molding Machine.

Write for complete description with prices of machines in which you are interested.

The Lodge & Shipley Machine Tool Co.
CINCINNATI, OHIO

BOILERS AND ENGINES

Engine, Porter-Allen, 14½"x34"; Buckeye, 14½"x24"; Phoenix Iron Works, 10½"x12", automatic. Boilers, 60 H. P. Firebox Portable; 40 H. P. Firebox Portable; 25x35 H. P. Scotch Boilers; Vertical Boilers, all sizes. Three 18 H. P. Traction Engines, \$350 each; 40 H. P. Springfield Gas Engine; 15 H. P. Superior Gas Engine; 15-horse McKewen Double Drum Hoisting Engine. The above goods must be sold at once.

D. L. CASEY MACHINE CO. SPRINGFIELD, OHIO

Special Bargains in Sanders

- 1 42" 3-drum Perfection Sander, thoroughly overhauled.....\$350.00
- 1 48" 3-drum Thomas Sander.....\$400.00
- 1 48" 3-drum H. B. Smith Sander.....\$500.00
- 1 48" 3-drum Royal Invincible Sander, used only 3 weeks.....\$550.00
- 1 54" 3-drum J. A. Fay & Co., fine order.....\$500.00
- 1 60" 3-drum Columbia Sander in A-1 condition.....\$600.00

JOINTERS

- 1 20" Carrey Hand Jointer.....\$100.00
- 1 30" Buss Extra Heavy Hand Jointer.....\$125.00

Woodworking machinery of all kinds. Write, stating your requirements.

CLEVELAND BELTING & MACH'RY CO.

1922 Scranton Rd. Cleveland, O.

MUST BE MOVED: ICE MACHINE

Penna. Iron Works, Corlies Driven; 30-ton Refrigerating, 15-ton Ice; in perfect condition; cheap for quick removal.

HERMAN L. WINTERER,

908-910 Beach Street Philadelphia, Pa.

ENGINE FOR SALE

One Horizontal McIntosh & Seymour Tandem Compound Condensing Engine, 11"x20"x 30", 240 I. H. P. at ½ cut off; 300 I. H. P. at ¼ cut off; 125 lbs. steam pressure; 28" vacuum; flywheel 32" face by 11 ft. diameter; weight 13,000 lbs. This engine is in first-class operating condition and could be shipped immediately.

The American Railway Co. Witherspoon Bldg., Phila.

2000 Adams-Bagnall and Gen. Electric Arc Lamps, A. C. and D. C.

FOR SALE

A bargain to quick buyer.

JOHN LEONARD & CO., Inc.

149 Broadway, New York

MACHINERY BARGAINS

A few selections from our big stock of snags. Write for **Free Complete List No. XB 213.**

- 1000 tons "T" Rails, 12 to 16 lbs.
- No. XB-31. Worm Gear Freight Elevator, 2000 lbs. cap.
- No. XB-32. Hoisting Engine, Dbl. Cyl. Drum, reversible link motion, 10 in. x 14 in.
- No. XB-33. 300 Storage Tanks, capacities from 25 to 2000 gals.
- No. XB-34. Sprague Electric 3-phase 20 H. P. Motor.
- No. XB-35. 200 pieces 15-in. 42-lb. "T" Beams.
- No. XB-36. Austin Jaw Crusher, 14-in. x 10-in. Opening.

HARRIS BROTHERS COMPANY, Owners
Chicago House Wrecking Company
35th and Iron Streets CHICAGO, ILL.

Westinghouse Type "C" Motors

3-Phase, 60-Cycle, 200-400 volt, 1120 R. P. M.
2-5 H. P.; 2-7½ H. P.; 2-10 H. P.; 1-15 H. P.; 1-20 H. P. Condition guaranteed.

Special Prices on Direct Current Motors

MILLER-OWEN ELECTRIC CO., Inc.

217-219 First Ave. Pittsburgh, Pa.

WAYNE REBUILT MACHINES

Furnished under plan carrying full protection to purchaser.

BAND-SAW MILLS—6" Fay-Egan, 7" Wayne, 8" Sinker-Davis.
CIRCULAR MILLS—Gar-Scott, Knight, Russell, Sinker-Davis.
PLANERS—29 Single Surfacers, 10 Double Surfacers, 7 Single Planers and Matchers, 8 Double Planers and Matchers.
MOULDERS—40 machines from 4" up to 12" and of every type.
RESAWS—48", 54" and 66" Band; 24", 32", 36" and 42" Circular.
BOX MACHINERY—Printers, Lock Corner Machines, Nailers, etc.
COOPERAGE—Hoop, Stave and Heading Machinery for every need.
Seven hundred machines in stock.
Our "Wayne List," covering complete stock, mailed to anyone interested.
We save you money.
We give you a square deal.

WAYNE MACHINERY CO. FORT WAYNE, IND.
Successors to Hanna-Brackridge Co.

PIPE

Second-hand, all sizes, 1/2" and larger, with new threads and couplings, guaranteed for service.

- 1 1/2-yd. Ransome concrete mixer with gasoline motor and loader on wheels.
- 3 3/4-yd. and 2 1/2-yd. Ransome mixers with engines on skids.
- 2 No. 2 1/2 Smith concrete mixers with engines on wheels.
- 1 5-lever Stroudsburg 7x10 cableway engine.
- 12 Lidgerwood, Lambert and other hoisting engines.
- 24" and 20" industrial rail and turntables.
- 1 5 H. P. Meitz & Weiss gasoline engine.
- 1 4-leaf 1-yd. orange-peel bucket.

PIPE & CONTRACTORS' SUPPLY CO.

3 DOVER STREET, N. Y. C.

New Branch, 343-353 East 123d Street

PIPE

FOR ALL PURPOSES

Slightly used Pipe from 1" to 12" with new threads and couplings. Thoroughly overhauled and tested before shipping.

We can save you money.

Jos. Greenspon's Sons Iron & Steel Co.
St. Louis, Mo.

SECOND-HAND PIPE WANTED IMMEDIATELY

All sizes in car lots. State where pipe can be inspected.

DAVIDSON PIPE & SUPPLY CO.

861 Western Ave. N. S. Pittsburgh, Pa.

FOR SALE

PIPE NEW & SECOND HAND

Furnished with Threads and Couplings. Suitable for All Practical Purposes

All Sizes In Stock Ready for Shipment

Send us your inquiries and get our prices. It will interest you.

Eagle Pipe Supply Company, Inc.
29 Howard Street N. Y. C.

1-75 H. P. DIESEL OIL ENGINE

3 cylinder vertical, belted type, with full equipment; seen in operation; bargain. Address

1555 MANUFACTURERS RECORD
BALTIMORE, MD.

Diesel Oil Engine

1-70 H. P. direct connected to a 120 K. W. 250 volt Western Electric Generator complete; seen running

Address POWER EQUIPMENT CO.
500 Fifth Avenue, New York

Direct Heat Rotary Dryer FOR SALE

One C. O. Bartlett & Snow Co. Direct Heat Rotary Dryer, 36x24, Style "M." Will sell for \$350 f. o. b. Dudley, Ky. Write or wire
WINCHESTER GRANITE BRICK CO.
Winchester, Ky.

ENGINES

Corliss. Gas.
24x48 Hamilton, \$1300. 2 50 H. P. Westge.
26x48 Hamilton H. D. 2 85 H. P. Westge.
800 H. P. Tand. C. 2 125 H. P. Westge.
Allis, \$1000. 125 H. P. St. Mary's.
1000 H. P. Cross C. 150 H. P. Buckeye.
Vilter, \$1000. 175 H. P. Snow.
32 and 60x60 Allis C. C. 2 280 H. P. Westge.
Other sizes.

Also Boilers, D. C. and A. C. Units, etc.
Write us for any Second-hand Machinery.
HAROLD R. WILSON MACHINERY CO.
419 Pine St. Write us for list. St. Louis, Mo.

FOR SALE

1 100 K. W. G. E. 250-volt D. C. Generator, D. C. to high-grade auto. engine.

100 K. W. Jeffrey 250-volt, belted to McEwer 16x16 engine.

100 K. W. Morgan-Gardner 250-volt, belted to 16x16 Skinner enclosed engine.

Both good for 125 K. W.

In stock.—Immediate shipment.—Guaranteed first-class electrically and mechanically.

THE ASSETS PURCHASING CO.
WHEELING, W. VA.

A. C. UNITS 3 PHASE 60 CYCLES

K. W. Make. Volts. Rev. Engine.
165 Westge. 220-440 225 Erie 18x18.
300 Westge. 220 120 C. C. Corliss.
400 Westge. 440 100 24x48 Corliss.
600 Westge. 440 80 32x48 Corliss.
1050 Ge. Elec. 220 100 McI. & S. C. C.

Also D. C. Units, Boilers, Engines, etc.
Write for any Second-hand Machinery.
HAROLD R. WILSON MACHINERY CO.
419 Pine St. Other Sizes St. Louis, Mo.

Dynamos and Motors

Switchboards, Fans, Instruments, Etc.

Large stock new and used, both alternating and direct, ready for immediate shipment. Repairing done. Entire plants or parts wanted.

FOR SALE

Brand new 75 H. P. G. E. 3-phase 60-cycle 850 R. P. M. 220 volts slip ring, with base pulley and starter, \$500. Motor is in original crate from G. E. Company. Never used.

R. SCHEINERT CO.

125 North Third St. PHILADELPHIA

Tampa Machinery Exchange

TAMPA, FLA.

Buy, Sell and Exchange Machinery of All Kinds

WRITE US YOUR WANTS

D. C. UNITS FOR SALE

One 40 K. W. and one 60 K. W. 250-volt D. C. direct-connected engine generator sets, complete with all accessories and guaranteed in excellent condition at bargain prices. Large stock motors and small generators. We buy and sell only modern high-grade electrical apparatus, which we thoroughly overhaul and guarantee fully.

V. M. NUSSBAUM & CO. Fort Wayne, Ind.

FOR SALE

P I P E

Second-Hand

All sizes, 1/2" to 24"

Furnished with new threads and couplings, suitable for every practical purpose.

Also large assortment of Contractors' Equipment, Hoisting Engines, Boilers, Concrete Mixers, etc.; all thoroughly overhauled.

Marine Metal & Supply Co.
167 South St. NEW YORK

COMPRESSORS, BOILERS, Etc. FOR SALE

- 4—Sullivan 2 Stage Tandem Compound Corliss Compressors, Type W. C., Capacity 2450 feet.
- 3—250 H. P. Heine Water Tube Boilers.
- 1—300 H. P. Heine Water Tube Boiler.
- 4—300 H. P. Keeler Water Tube Boilers.

Will make low prices on this and other equipment. Write for particulars. Immediate shipment.

Used only on Board of Water Supply Contract for City of New York.

MASON & HANGER COMPANY, INC.

Contractors

VAN CORTLANDT PARK, NEW YORK, N. Y.

FOR SALE

Water Tube Boilers

2—250 H. P. each Heine Water Tube Boilers, designed for 180 lbs. pressure; used three years only; complete excepting stacks.

1—500 H. P. Stillwell-Bierce Open Type Feed Water Heater.

2—6x4x6 Worthington Duplex Steam Pumps.

1 lot Extra Heavy Pipe, Valves and Fittings.

This plant is still on the foundation at East Chicago, Indiana. We will quote an exceptionally attractive price on the complete outfit for immediate delivery before we bring same to our warehouse.

Pfannmueller Engineering Company

Suite 1733 First National Bank Bldg.

CHICAGO

WANTED TO BUY

PIPE AND CASING

8, 10 and 12-inch, also other sizes. Will pay spot cash for good usable material.

TEXAS SUPPLY CO. BEAUMONT, TEXAS

BOILERS FOR SALE

Four new 100-horse Fire Box Return Tubular Boilers, guaranteed by Bond and Hartford Insurance Papers.

Address TUBULAR

Care Manufacturers Record, Baltimore, Md.

Second-Hand Tools for Sale

Now in use, of modern type, first-class order and condition, with full and complete equipment, consisting of Lathes, Planers, Drills, Horizontal and Vertical Boring Mills and Milling Machines.

NEW HAVEN MFG. CO., New Haven, Conn.

FOR SALE—New Lathes at Bargain Prices

Geared head 20"x10", 18"x10", 15"x8", 16"x8", 16"x6". Cone head 20"x10", 15"x8", 15"x6". All the above with semi-quick-change gears. Second-hand lathes with geared heads, quick-change gears, 16"x8", 16"x6", 15"x6". Second-hand lathes, cone head, plain gears, 25"x18", 27x16", 20"x10", 18"x8", 13"x6", 13x5'.

CHAS. T. LEHMAN Birmingham, Ala.

BOILERS

164 H. P. R. & W. \$300. 110 lbs. pressure.
2 180 H. P. Heine, \$575 ea. 127 lbs. pressure.
3 222 H. P. Heine, \$650 ea. 135 lbs. pressure.
255 H. P. Stirling, \$760. 160 lbs. pressure.
2 250 H. P. Heine, \$675 ea. 135 lbs. pressure.
1 250 H. P. Heine, \$1200. 150 lbs. pressure.
500 H. P. R. & W. (stokers) 175 lbs. pressure.

HAROLD R. WILSON MACHINERY CO.
419 Pine St. Other Sizes St. Louis, Mo.

Electrical Machinery

For quick removal we are offering a 150 K. W. 250 V. Western Electric Generator direct connected to a Watertown engine. Unit in excellent condition. Price \$1750.

We also carry a large stock of all kinds of electrical machinery. Let us have your requirements.

GEORGE SACHSENMAIER & CO.,
145 N. Third St., PHILADELPHIA

BOILERS

Two 250 H. P. Babcock & Wilcox Water-tube Boilers, insurance certificate 160 lbs. steam pressure, each \$1000.
Two 230 H. P. Heine Water-tube Boilers, insurance certificate 150 lbs. steam pressure, each \$900.

DUZETS & SON, 30 Church St., NEW YORK
Send for complete "Bargain List."

Woodworking Machinery

PLANERS (Double Surface)

1 30"x14" "Power."
1 30"x6" "Woods."

PLANERS (Single Surface)

1 No. 4 1/2 30"x7" "Clements American."
1 24"x8" "Smith."
1 24"x8" "Colladay."
1 24"x8" "Sidney."
1 No. 4 1/2 24"x7" "American."
1 No. 1 1/2 24"x7" "American."
2 24"x6" "Friction "Crescent."
1 24"x6" "Fay."
1 24"x4" "Gleason."
2 18"x6" "Friction "Crescent."
1 18"x6" "Crescent."

PLANERS AND MATCHERS

1 24"x6" "Power."
1 24"x6" "Crescent."
1 9"x4 1/2" "Flooring "Power."

Also carry in stock a large variety of other woodworking machinery, electric and steam power equipment, metal-working machinery and contractors' outfits. We offer our machinery in good serviceable condition—some practically like new. Send for list.

L. F. SEYFERT'S SONS, Inc.

437 N. Third St. Philadelphia

Dredge Boat For Sale

One dredge boat built of cypress (Fairbanks Machinery) with two-yard dipper. For terms and particulars, apply to

A. WILBERTS' SONS LUMBER & SHINGLE CO.
PLAQUEMINE, LA.

COTTON OIL MILL AND REFINERY EQUIPMENT FOR SALE

Equipment for 100-ton Cotton Oil Mill.

Equipment for 200-barrel Cotton Oil Refinery

All machinery and equipment in excellent condition and will be sold as complete 100-ton Cotton Oil Mill outfit or complete equipment for Cotton Oil Refinery capable of refining 200 barrels of cotton oil per day, at attractive figures. Can be inspected at Mill on request. Send for particulars to

VIRGINIA FIBRE CORPORATION,

Equitable Building,

WILMINGTON, DELAWARE

We Buy and Dismantle FACTORIES MILLS MACHINE SHOPS and all kinds of INDUSTRIAL PLANTS

We are always in
the market to buy

Scrap Iron and Steel OF EVERY KIND

FRANK SAMUEL

Harrison Building

15th and Market Sts. Philadelphia, Pa.

SECOND HAND MACHINE TOOLS

OF EVERY CON-
CEIVABLE TYPE

Send for Stock List

PRENTISS TOOL AND SUPPLY CO.

New York

On account of change in our power supply, we are offering for sale our present equipment, consisting of one 160 K. W. G. E. direct connected unit and a number of motors. All in first-class condition. Detailed list and prices furnished on application.

Kilby Frog & Switch Co.

P. O. Box 914

BIRMINGHAM, ALA.

Saw Mill and Equipment

FOR SALE—Complete Sawmill, 8' band with 6' horizontal resaw, 12" steam feed, Clark carriage with Prescott steam set, boilers, engines, dynamo, sprinkler system of 600 heads, etc.

30x14 Double Surfer, Holmes Planer and Matcher, Berlin 5" Resaw.

5 miles 45-lb. Steel Relay Rails, 1 mile 60-lb. 35-ton Standard Gauge Shay Gear Locomotive.

65-ton Standard Gauge Shay Gear Locomotive.

Campbell Lumber Co.

MARLINTON, W. VA.

THERE IS A REASON

why our properly rebuilt machinery
gives satisfaction

ASK US

ENGINES, CORLISS: 26x48 Filer & Stowell, heavy duty; 24x48 Hamilton; 18x42 Lane & Bodley; 16x42 Allis; 14x42 Hamilton; 14x36 Nagle; 12x30 Hamilton; 10x30 Hamilton; 10x24 Hamilton.

ENGINES, AUTOMATIC: 21x22 Ridgway; 19x18 Ball; 14x14 Ideal; 10x16x12 Buffalo Compound; 12x14 Green; 12x12 Armstrong & Sims; 10x13 Buckeye; 9x10 New Victor; 8x14 Noyes; 8x10 McEwen; 5x6 Harrisburg.

ENGINES, THROTTLING: 20x24 H. S. & G.; 16x18 Skinner; 16x18 Ames; 14x14 Lewis; vertical; 12x13 New Enterprise; 12x14 Gibbs; 11x16 H. S. & G.; 10x12 Ajax; 10x15 Nagle; 9x16 Brownell; 8x10 New Erie; 8x10 Brownell; 7x10 Atlas; 6x6 Beggs; 3x4 Kriebel.

BOILERS, STATIONARY: HIGH PRESSURE: 1 200 H. P. for 125 lbs.; 2 150 H. P. for 150 lbs.; 3 150 H. P. for 125 lbs.; 2 100 H. P. for 125 lbs.; 2 80 H. P. for 125 lbs. Standard from 150 H. P. to 20 H. P. for 100 lbs.

BOILERS, FIRE BOX: 150 to 10 H. P. high and low pressure.

BOILERS, VERTICAL: 100 to 4 H. P. plain and submerged tubular.

GENERATORS AND MOTORS: All sizes and kinds, belted and direct connected.

MISCELLANEOUS: Heaters, open and closed; pumps, all sizes; sawmills; corn mills and feed grinders; exhaust fans and blowers; woodworking machinery; iron-working tools; leather, rubber and canvas stitched belt; pipe, valves and engine and boiler fittings.

Sole manufacturers of the Leader Injector and Ejector. Ask for circular.

THE RANDLE MACHINERY CO.
1734 Powers St., Cincinnati, O.

Bargains in Second-Hand Machinery

MUST BE MOVED AT ONCE

BOILERS

1 75 H. P. Pennsylvania Horizontal Tubular, 50 tubes.

1 60 H. P. Horizontal Tubular.

3 15 H. P. Lidgerwood Uprights.

1 20 H. P. Surrey Parker.

1 6 H. P. Erie City Upright.

MISCELLANEOUS SAW MILL EQUIPMENT

1 Sinker Davis Sawmill Rig.

1 Surrey Parker Log Loader.

1 Surrey Parker Log Loader Steam Plant.

1 Wheland Gang Edger.

1 Set Live Lumber Rolls.

1 B. T. B. Knife Grinder.

Saws from 19 to 55".

ENGINES

1 10"x15" Haberkorn.

1 12"x14" Wheland.

2 10"x12" Class C Whelands.

2 9"x11" Class C Whelands.

1 13"x16" Twin Throttling Wheland Engine.

1 9"x9" Vertical.

1 9"x10" Shepherd.

1 12"x12" Sinker Davis.

1 12"x10" Erie City.

MISCELLANEOUS

1 Forbes 3" Pipe Machine.

1 Dean Steam Pump.

1 James A. Fay Matcher.

Lot unused 16"x24" Crane Fittings.

CHAMPION FIBRE COMPANY

CANTON, N. C.

CONSOLIDATED IRON & METAL CO.

Wholesale and Retail Dealers in

Scrap Iron, Metals, Rubber, Etc.

NEW AND RELATING RAILS

SECOND-HAND MACHINERY AND PIPE

CHATTANOOGA, TENN.

SPECIAL BARGAINS

BOILERS

3 250 H. P. Franklin Horizontal Water-Tube, 150 lbs. steam.

1 200 H. P. Geary Water-Tube, 150 lbs. steam.

1 175 H. P. 72"x20" Horizontal Return Tubular, 120 lbs. steam.

1 150 H. P. 72"x18" Horizontal Return Tubular, 125 lbs. steam.

1 150 H. P. Babcock & Wilcox Water-Tube, 150 lbs. steam.

1 125 H. P. 66"x18" Horizontal Return Tubular, 125 lbs. steam.

1 80 H. P. Vertical, 100 lbs. steam.

1 70 H. P. 54"x16" Horizontal Return Tubular, 125 lbs. steam.

1 70 H. P. 54"x16" Horizontal Return Tubular, 100 lbs. steam.

2 50 H. P. Locomotive, portable, 100 lbs. steam.

CORLISS ENGINES

28"x48" Hamilton.

28"x60" International.

20"x42" Hewes & Phillips.

18"x42" Watts-Campbell.

16"x36" Allis.

16"x32" Rickards.

14"x42" Hamilton.

2 14"x36" Scottsdale.

12"x24" Hewes & Phillips.

10"x24" Watts-Campbell.

AIR COMPRESSORS

1 18"x20"x13 1/4"x24" Ingersoll-Sargeant Class A Straight Line, two stage. Capacity 940 cu. ft.

1 22"x22"x24" Ingersoll-Sargeant Class A Straight Line. Capacity 973 cu. ft.

1 12"x14"x14" Ingersoll-Sargeant Class A Straight Line. Capacity 385 cu. ft.

1 12"x12"x16" Ingersoll-Sargeant Class C Straight Line. Capacity 276 cu. ft.

1 10"x10"x10" Ingersoll-Sargeant Duplex. Capacity 276 cu. ft.

DIRECT CONNECTED UNITS

1 200 K. W. 220-volt D. C. Westinghouse, 3-phase 25-cycle Generator, direct connected to Buckeye Engine.

1 150 K. W. 250-volt D. C. Crocker-Wheeler Generator, direct connected to 14 1/2"x24"x16" Wright Center-Crank Tandem Compound Automatic Engine, 200 R. P. M.

1 50 K. W. 125-volt D. C. Westinghouse 6-pole Generator, direct connected to 10"x18"x10" Westinghouse Compound Engine, 315 R. P. M.

1 105 K. W. 220-volt 3-phase 60-cycle Westinghouse Alternator, direct connected to Buckeye Engine.

BOILERS, PUMPS, HOISTING ENGINES

WESTINGHOUSE ENGINES, GAS AND

GASOLINE ENGINES, HEATERS.

STONE CRUSHERS, AND GEN-

ERAL EQUIPMENT

FRANK TOOMEY, Inc.

127-131 North Third Street

PHILADELPHIA, PA.

ROLLER MILLS

For Sale

2 stands 9x30", Noye Corrugated.

1 stand 9x30", Noye Corrugated.

1 stand 9x30", Allis Corrugated.

1 stand 9x30", Allis Corrugated.

2 stands 9x30", Allis Corrugated.

2 stands 9x24", Allis Corrugated.

2 stands 9x30", Nordyke Smooth.

1 stand 9x30", Dawson Smooth.

1 stand 9x24", Noye Smooth.

14 stands 9x24", Allis Smooth.

C. H. DEMPWOLF, YORK, PA.

FOR SALE

Boilers, Stationary Engines, Hoisting Engines, Pumps, new and second-hand, every size and for every duty.

HOWARD W. READ COMPANY

Third and Arch Sts. Philadelphia, Pa.

FOR SALE

1 American Holst & Derrick Co. Ditcher and Steam Shovel equipped with 9-16-yd. dipper. Installed new Sept. 1, 1912. In use 10 months. Additional information upon request. Location, Jacksons Lake, Ala., L. & N. Railroad.

1 10-ton Browning Locomotive Crane equipped with 2 4-wheel trucks. Equipped with 1-yd. Hayward Orange Peel Bucket. Location, Coosada, Ala., L. & N. Railroad, ready for shipment, if necessary, on its own wheels.

Kirkpatrick Sand & Cement Co., Birmingham, Ala.

BOILERS FOR SALE

Three horizontal return tubular boilers, with fittings. Boilers 54 inches by 15 feet; 48 3/4-inch tubes. Now tested to 150 lbs. working pressure. Free from leaks, blisters and patches; in first-class condition.

Sold only for purpose of replacing with larger units. Can be seen at Pumping Station, Trenton, N. J. Address

J. R. FELL, Director Streets and Public Improvements.

Railroad and Contractors' Equipment and Supplies.

Yours for the Asking

Our new Bulletin will be of great assistance to you in selecting your equipment. Write for it today.

"ZELNICKER" IN ST. LOUIS

CONCRETE MIXERS

1 1/2-yd. Koehring Mixer, boiler and engine on trucks, side loader and water tank. Has new drum and tracker wheels.

1 No. 10 Chicago Mixer, gasoline engine on trucks, side loader and tank; 1 year old.

2 1/2-yd. Smith Mixers, boiler and engine on trucks. Two with side loader and tanks.

Overhauled, ready for immediate shipment.

GEORGE B. CURD

Merchants Building Cincinnati, Ohio

Concrete and Mortar Mixers, Cement Block and Brick Machines For Sale

Concrete and mortar mixers of all kinds, batch or continuous, new or second-hand. What is your preference? Warehouses in all principal cities. Also cement block and brick machines, any kind. Real bargains.

Concrete Mixer & Machinery Exchange
29 Broadway, New York City

SECOND-HAND AND NEW MACHINERY

1 17x22" Locomotive; 1 14x20" Locomotive;

1 Ingersoll-Rand Compressor, Imperial type, 570 cubic ft. air; 1 Ingersoll-Rand Compressor, Imperial type, 200 cubic ft. air; 1 Hand Drill Compressor, 75 cubic ft. of air; 1 3/4

Fay & Scott Engine Lathe, as good as new; 1 Georgia Iron Works Trimmer; 1 10x12 Ajax Engine; 1 7x10 Skinner Engine; 1 8x10 Ajax Engine and Boiler on wheels; 1 100-horsepower Tubular Boiler; 1 20-horsepower Locomotive Boiler; 1 15-horsepower Tubular Boiler; 1 20x20" Slab Conveyor; 1 6" Pipe Bent for Slab Conveyor; 1 Kentucky Power Cane Mill; 1 Boiler for Turpentine Pump, new; 1 Williams Vulcanizer for Tubes and Casings; 1 Fairbanks-Morse 2-horsepower Engine and Pump, new; 1 Thompson No. 2 Log Jack, new; 1 Thompson No. 1 Log Jack, new; 1 Thompson No. 2 Slab Conveyor, new; 1 Thompson No. 1 Slab Conveyor, new; 1 Thompson Wood Splitter, new; 1 Thompson No. 1 Power Cane Mill, new; 1 Pipe Machine, second-hand; 1 9" Filer & Stowell Twin Engine; large stock of Pulleys and Hangers.

If you do not see what you want, write us, as our stock is changing daily.

Thomasville Iron Works Thomasville, Ga.

MACHINERY FOR RENT

Ten-ton Buffalo-Pitts Roller; Water Wagon and Scarifier. Outfit as good as new. Service guaranteed. Address

Lock Box 31, Morrisville, Pa.

RELAYING RAILS FOR SALE

500 Tons 80-lb. Rails.

500 Tons 90-lb. Rails.

Several Locomotives and Cars.

CHAS. HYDE

Commonwealth Bldg. PITTSBURGH, PA.

FOR SALE CHEAP

One Land Pile Driver, 3000-lb. hammer, 50 ways and steel rollers.

One Steel Stack, S. S., 6"x10".

One Steel Stack, S. S., 10"x15".

CENTRAL TRANSFER CO.

415 N. Front St. BALTIMORE, MD.

LACKAWANNA STEEL SHEET PILING. RAILS, LIGHT AND HEAVY SECTIONS. STRUCTURAL SHAPES.

J. E. FRANKS, Agt.

729 Candler Building ATLANTA, GA.

A. S. C. E. Sections LIGHT STEEL RAILS

PROMPT DELIVERY.

8, 12, 16, 20, 25, 30, 35, 40 pounds per yard.

With Splices and Spikes.

UNITED STATES RAIL CO.

Manufacturers, Cumberland, Md.

Certificates of Inspection by Hildreth & Co.,

Inspecting Engineers of New York City, as-

suming absolutely first quality, furnished free of cost.

Locomotives

Four wheel type

40 tons; 17"x24"; 160 lbs. pressure

Overhauled

Modern

E. H. WILSON & COMPANY

ARCADE BUILDING

PHILADELPHIA

RELAYING RAILS

Send me your inquiries

E. C. SHERWOOD

48 Church Street NEW YORK

Georgia Car & Locomotive Company

ATLANTA, GA.

LOCOMOTIVES

FREIGHT CARS

PASSENGER COACHES

S. H. Std. Car Trucks for Logging

LARGEST STOCK REBUILT EQUIPMENT IN U. S.

GEORGE M. NEWHALL ENGINEERING CO.

ROLLING MILLS: HYDE, CLEARFIELD COUNTY, PA.

NEW YORK GENERAL OFFICES: PHILADELPHIA, PA. PITTSBURGH

MANUFACTURERS OF RAIL CARBON; ALSO BILLET STOCK

LIGHT STEEL RAILS

12, 16, 20, 25, 30, 35, 40 and 45 lb. SECTIONS
SPLICE BARS, TRACK BOLTS AND SPIKES, FROGS AND SWITCHES

RELAYING STEEL RAILS

IN ALL SECTIONS FOR IMMEDIATE SHIPMENT FROM STOCK

Relaying Rails

56 to 80-lb. Sections

Ready for prompt shipment. New or relaying light rails. New frogs, switches, etc.
20-ton used Climax engine in excellent condition. Specifications on request.HYDE BROS. STEEL & RAIL CO.
Benedum-Trees Bldg. Pittsburgh, Pa.

RAILS LOCOMOTIVES

RELAY RAILS

LOCOMOTIVES—Narrow and Standard Gauge. 150 Locomotives at our shops 6 to 80 tons. Freight and Passenger Cars

Largest Stock Locomotives in United States

Southern Iron & Equipment Co.
ATLANTA, GA.

Sweet's Steel Co.

WILLIAMSPORT, PA.

Manufacturers of

Light Steel Rails

12, 16, 20, 25, 30, 35 and 40-lb. Sections.
Also Splices, Bolts, Nuts and Spikes.
Our Rails are first quality. A. S. C. E. Section, carefully inspected.Prompt Shipments from Stock
Bedstead Angles and Special Shapes.

PRICED FOR QUICK SALE

A Famous 11 H. P. Monitor Gasoline Engine

Mounted on steel beam trucks, with tongue, neck yoke and doubletrees, with batteries and coil—water cooled—6"x8" cylinder, mechanically operated valves, tapered and ground valve cages—no gaskets—with 16"x6" friction clutch pulley—weight complete 3600 pounds.

For \$318.00
F. O. B. Wheeling.

The addition of kerosene attachment, Elkhart magneto and other similar improvements on full line of Monitor engines accounts for this low price—new in every respect—fully guaranteed—reasonable trial to responsible parties.

Better wire your order. Other good values in Cook, Fairbanks-Morse, Novo and Bull Dog engines in certain sizes.

Wheeling Mold & Foundry Co.

WHEELING, W. VA.

FOR SALE

Ten-ton Gasolene Road Roller, used but one season. Will make low price and hold roller for spring delivery if desired. Write

FITCH PAVING COMPANY
Care The Manufacturers Record

RELAYING RAILS

20, 25, 30, 35, 40, 45, 50, 56, 60, 65, 70, 80, 85, 90 and 100 lb., all with Fish Plates.

NEW RAILS

8, 12, 16, 20, 25, 30, 35, 40, 45 lb., at manufacturer's prices.

LARGE TONNAGES—Carload and less carload lots, advantageously located for Southern delivery.

Splice Bars for any section rail in stock. Frogs, Switches, Bolts, Nuts, Spikes, and all Track Accessories.

New and Second-hand Pipe, all sizes, with good Threads and Couplings.

Rebuilt Locomotives, Cars and Equipment. All second-hand materials guaranteed. Subject to inspection during loading, or will ship subject to your approval at destination. Attractive prices. Quick Shipment.

Before buying write for our bulletin.

L. E. FOSTER CO., Park Building, Pittsburgh, Pa.

For Sale or Rent

COMPRESSORS

1 22x22 13 1/4x24 Sullivan, steam driven, class WB 2, straight line, 2 stage, capacity 1160 cu. ft.

1 24x24x30 McKiernan, class A, straight line, capacity 1414 cu. ft.

1 24x24x30 Ingersoll, class A, steam driven, straight line, capacity 1223 cu. ft.

2 16x20x16 Ingersoll-Sargeant, class H-1, duplex, steam driven, capacity 1540 cu. ft.

2 65-ton Bucyrus steam shovels, 2 1/2-yd. dipper (bargain).

2 Lidgerwood hoisting engines, 14"x18", D. C. three tandem drums, reversible and link motion, suitable for dredge, cableway or incline work.

A complete stock of hoisting engines, concrete mixers, derricks, pumps, boilers, etc.; in fact, everything for the contractor.

HENRY A. HITNER' SONS CO.
Station K PHILADELPHIA, PA.

LOCOMOTIVES

10-WHEEL TYPE

Six—Built by Baldwin Locomotive Works in 1906, excellent condition, modern in every respect; cylinders 20x26", driving-wheel centers 60", weight about 80 tons; suitable for either freight or passenger service. Ready for immediate delivery.

J. E. FRANKS

729 Candler Building,
ATLANTA, GA.

LOCOMOTIVES

AND

STEAM SHOVELS

Four standard-gauge Climax locomotives, weighing 30 to 45 tons; excellent condition; thoroughly overhauled; immediate shipment.

Also forty other standard and narrow gauge locomotives at our shops, Birmingham.

STEAM SHOVELS

We have ten steam shovels, of different sizes and makes, thoroughly overhauled. Write us for prices and terms.

BIRMINGHAM RAIL & LOCOMOTIVE CO.
Birmingham, Ala.414 Coffee Exchange Bldg.
New York City

Passenger Coaches

Released by Pennsylvania R. R.

HENRY LEVIS & CO.

26 South 15th Street

PHILADELPHIA

Relaying Steel Rails

35-lb., 40-lb., 56-lb., 60-lb., 70-lb., 80-lb.,

85-lb. and Angle Bars to lay same

Advantageously located for Southern delivery; also other weights of RELAYING RAILS, in different sections of the country; and NEW STEEL RAILS, all weights. We handle first-class Relaying Rails, and do not select them from scrap. Let us know your requirements. We buy Rails fit to relaying, and pay spot cash.

ROBINSON & ORR Pittsburgh, Pa.
Low Prices on New FROGS and SWITCHES.

For Sale Relaying Steel Rails

78 tons, 48 lbs. per yard, with plates
200 tons, 56 lbs. per yard, with plates
800 tons, 60 lbs. per yard, with plates
400 tons, 67 lbs. per yard, with plates

NEW STEEL RAILS ALL WEIGHTS

The Steel Rail Supply Company

No. 2 Rector St. New York City

Contractors' Plant For Sale At a Bargain

2 10-ton Road Rollers.
2 Steel Tank Sprinkler Wagons.
1 25 H. P. Traction Engine.
3 No. 4 Champion Crushers on wheels with Revolving Screen and Elevator.
6 Wheel Scrapers, Steam Drill Pump, etc.
2 1/2-yard Smith Mixers with Steam Boiler and Engine mounted on same frame.
SOUTHERN MACH'Y AND EQUIPMENT CO.
Lynchburg, Va.

Plant and Equipment FOR SALE

Including Locomotives, Gondolas, Derricks, Hoisting Engines, Boilers, Concrete Mixers, Rock Drills, Buckets, Pumps, Engines, Elevators, Conveyors, and Camp Equipment.

ALABAMA POWER COMPANY

Engineering Department,
Birmingham, Alabama.

CONTRACTORS' EQUIPMENT

1 22 H. P. Buffalo Pitts Traction Engine.
4 7-yd. Buffalo Pitts Traction Cars, 10" tread.
4 2 1/2-yd. Steubener Excelsior Bottom-Dump Buckets.

CABLEWAYS

1 Lidgerwood, 1700' span, 10x12 engine, complete; no towers.
1 Lidgerwood, 875' span, 9x10 engine, complete; no towers.
1 Lidgerwood, 750' span, 9x12 engine, complete; no towers.
1 10-ton Browning Crane, 38' boom, fine condition.

BOILERS

4 40 H. P. on wheels, 100 lbs. steam.
3 66x16 H. T. Boilers, butt strapped, 120 lbs. steam.

AIR COMPRESSORS

2 1900' Belt Drive Band D 3 Type, 17x27x30.
1 845' Belt Drive Band D 2 Type, 22x14x16.
1 Ingersoll-Rand, Class A, steam driven, 20x22 1/2x24.

Send for our complete list.

STERLING MACH'Y CO.

30 Church Street NEW YORK

Established 1866

Incorporated 1905

Plates--Castings--Bridges Structural Steel

BOLTS

NICKEL-
CHROMIUM
RAILS

SPIKES

BARS

PIG IRON

AGENTS:

Maryland Steel Co.

AGENTS:

Penna. Steel Co.

OPEN HEARTH AND BESSEMER

FROGS and SWITCHES
GIRDER and STANDARD TEE RAILS

R. C. HOFFMAN & CO.

INCORPORATED

BALTIMORE, MARYLAND

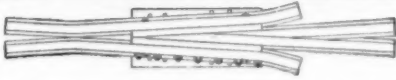
OLIVER DUMP & SPREADER CARS

(Dumps by Air or Hand)

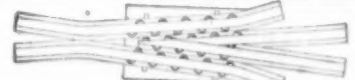
THE WM. J. OLIVER MFG. CO.

Only AIR DUMP CAR under absolute control of operator. Can be brought back to upright position, after passing center of gravity, before entire contents of car have been unloaded. This admits of equal distribution of material on both sides of track. Write.

KNOXVILLE, TENN.



Portable and Industrial Track
THE CINCINNATI FROG & SWITCH CO.
CINCINNATI, OHIO



Frogs, Switches, Crossings, Switch Stands, Rail Braces, Etc.

(3)

EQUIPMENT BARGAINS

- 1 Contractor's outfit; Wagons, Slip Scrapers, Dump Cars, 36" gauge.
- 1 Little Giant Steam Shovel.
- 1 Huber Traction Engine.
- 1 Hoisting Engine.
- 1 Centrifugal Pump.
- 1 Rollers, Stack, etc.
- 1 Porter build Locomotive, Saddle-Tank, 7x12, 36" gauge, new.
- 1 standard gauge 17x24 Baldwin.
- 1 36" gauge 9x14 Saddle-Tank Vulcan.
- 1 36" gauge 9x14 Saddle-Tank Porter.
- 1 10x16 36" gauge Richmond Loco. Works 6-wheel Saddle-Tank.
- 1 42" gauge American type Va. Iron Works, 9x16.
- 1 42" gauge Saddle-Tank Porter.
- 1 45-ton Vulcan Steam Shovel on trucks, standard gauge.

J. H. MACLEARY, SUFFOLK, VA.

FOR SALE

Six ton tandem paving roller in good condition. Write

BOYD CONTRACTING CO.
care The Manufacturers Record

Tractor-Roller and Wagons FOR SALE

A Buffalo Steam Ten-Ton Tractor and Roller, and Twelve 5-Ton Wagons for use with it. Used about three months.

F. A. WOOD, County Commissioner
St. Petersburg, Fla.

Steam Shovels Dump Cars Locomotives Locomotive Cranes

We have 1000 Bargains in the above machinery.
We lease or rent, with privilege of purchase.

CONTRACTORS' SERVICE COMPANY

Renters and Sellers of Guaranteed Used Equipment.

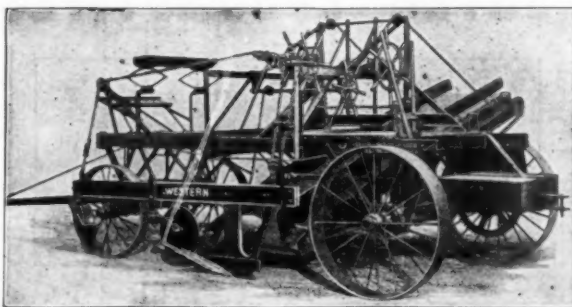
52 Church Street

NEW YORK CITY

THE AMERICAN FROG & SWITCH CO., Hamilton, Ohio
Frogs, Switches, Switch Stands, Rail Braces

RAILS NEW AND RELAYING RAILS
RAILROAD BRIDGES and EQUIPMENT
HENRY LEVIS & COMPANY
26 South Fifteenth Street PHILADELPHIA

THE WEIR FROG CO.
Manufacturers of
Frogs, Switches, Crossings Rail Braces etc.
CINCINNATI, O.



A MONEY SAVING INVESTMENT FOR YOU, MR. CONTRACTOR—

Put a Western Elevating Grader on the job and save on your wagon loading. Load as many as 100 1½-yard wagons per hour. Western Elevating Graders are also invaluable for Road Work, Canal Building, etc. Should be a part of the equipment of every up-to-date contractor.

Get all the advantages and full details in our illustrated catalog.

WESTERN WHEELED SCRAPER CO.
AURORA, ILLINOIS

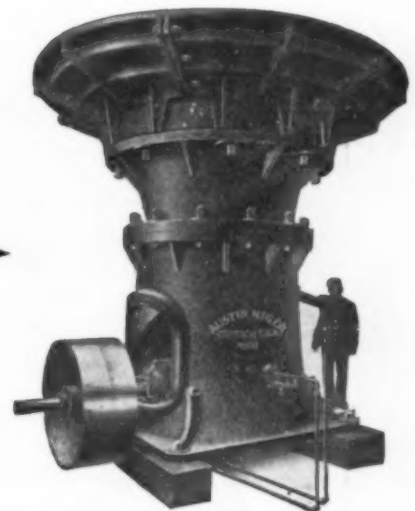
EARTH AND STONE HANDLING MACHINERY

AUSTIN GYRATORY CRUSHERS

Made in eight
sizes



50 to 5000 tons
per day



Plans and Specifications submitted and expert advice free on any problems involving rock-crushing or earth handling.

Austin Manufacturing Co.
CHICAGO

New York Office:
50 Church St.

We Manufacture—Road and Elevating Graders, Scarifiers, Road Rollers, Quarry Cars, Dump Wagons, Stone Spreaders and Street Cleaning Machinery

Canadian Agents:
Mussens, Ltd., Montreal

INDUSTRIAL LOCOMOTIVES



Reliability and constant service determine the value of a locomotive. The prompt and certain movement of material and the finished product is important to prevent delay.

Our standard locomotives for industrial service are built to insure reliability and

constant service. Only tested materials are used in their construction. Interchangeability of like parts is guaranteed, and long delays waiting for duplicate parts avoided.

AMERICAN LOCOMOTIVE COMPANY

30 CHURCH STREET, NEW YORK

McCormick Building, Chicago

Carl G. Borchert, Pioneer Bldg., St. Paul, Minn.

Dominion Express Bldg., Montreal, Canada

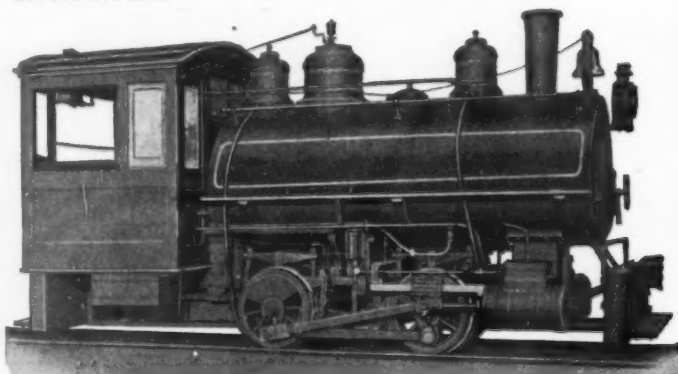
A. Baldwin & Co., New Orleans, La.

N. B. Livermore & Company, Los Angeles and San Francisco, California

Northwestern Equipment Company, Seattle, Wash., and Portland, Oregon

CONTRACTORS

make no mistake when they buy a Baldwin locomotive. They get an engine that is suited to the work and built for severe service.



The illustration shows one of the standard Baldwin "dinkies"—an 18-ton engine with heavy frames, large boiler, ample water and fuel capacity and high-class equipment; a reliable locomotive that is built for service and will serve you well.

The Baldwin Locomotive Works
PHILADELPHIA, PA., U. S. A.

Cable Address, "BALDWIN PHILADELPHIA"

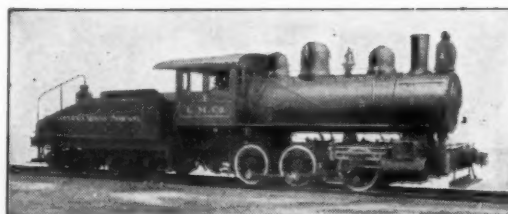
Represented by

Charles Riddell, 625 Railway Exchange, Chicago, Ill. F. W. Weston, 50 Church Street, New York, N. Y.

C. H. Peterson, 1610 Wright Building, St. Louis, Mo. George F. Jones, 407 Travelers Building, Richmond, Va.

A. Wm. Hinger, 722 Spalding Building, Portland, Ore.

"PORTER LOCOMOTIVES"

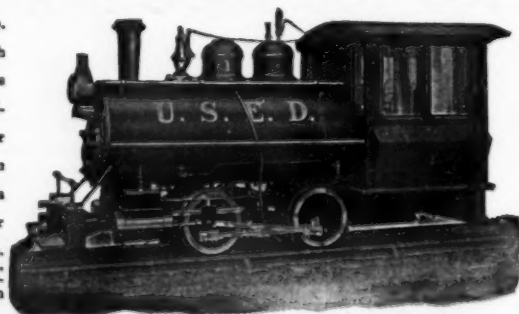


STEAM AND COMPRESSED AIR

For all Gauges of Track and Every Variety of Service, including Mine, Furnace, Lumber, Plantation, Industrial and Contractors' use. Locomotives 36" and 56 1/2" Gauge on Hand for Immediate Delivery.

H. K. PORTER COMPANY 412 Wood St. PITTSBURGH, PA.

BRANCHES:
Chicago, 12 and 14 So. Canal Street.
New York, 362, 50 Church Street.
St. Louis, 654 Pierce Building.
New Orleans, 208 Godchaux Bldg.
Pittsburgh, 405 Oliver Bldg.
Winnipeg, 45 Canadian Life Block.
Vancouver, 175 Cordova Street.
St. Paul, 1908 Pioneer Press Bldg.
Seattle, 617 Western Ave.
F. H. Hopkins & Co., 286 St. James St., Montreal, Que., Canadian Representative.



DAVENPORT LOCOMOTIVE WORKS
DAVENPORT, IOWA

We Manufacture Locomotive Cranes Only
OHIO LOCOMOTIVE CRANE COMPANY
BUCYRUS, OHIO

Southern Offices: 94 Home Life Building
1207 Brown-Marx Building

WASHINGTON, D. C.
BIRMINGHAM, ALA.

LIMA LOCOMOTIVES



SHAY GEARED LOCOMOTIVE

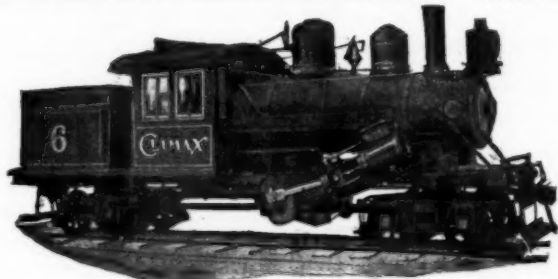
This locomotive has the advantage of three cylinders, giving an equal distribution of power, perfect balance on rail, least possible vibration. Write for catalogue "O."

BRANCH OFFICES

NEW YORK—50 Church Street NEW ORLEANS—Woodward, Wight & Co., Ltd.
CHICAGO—520 McCormick Building.

Lima Locomotive Corporation, Lima, Ohio

CLIMAX IMPROVED GEARED LOCOMOTIVES FOR WOOD AND STEEL RAIL



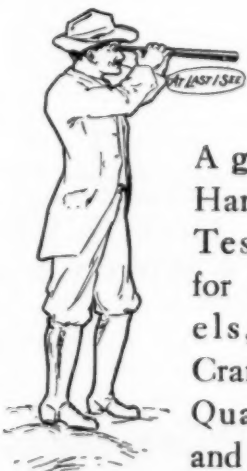
GET CATALOG H

CLIMAX MANUFACTURING CO. 311 West Main St., CORRY, PA.
C. T. Patterson Co., New Orleans

If you wish to keep posted on the progress of the South
read the

MANUFACTURERS RECORD

Price \$4.00 a year, or six months for \$2.00



A guaranteed
Hand Forged
Tested Chain
for Steam Shov-
els, Dredges,
Cranes, Foundries,
Quarries, Vessels,
and I also SEE it is
stamped with the man-

ufacturer's initials, W. C. & I. Co.,
a guarantee that it is of the best
material, the best workmanship,
which—with proper testing and in-
spection it receives—spells

QUALITY

And I further will SEE that my next
order is placed with the

Weimer Chain & Iron Co.
Lebanon, Pa., U. S. A.

Succeeding Trenton Iron Co.

American Steel & Wire Company's American Tram- AERIAL Iways

BLEICHERT
SYSTEM

WE ARE THE SOLE LICENSEES IN
AMERICA OF THIS TYPE OF CON-
STRUCTION. EVERY DETAIL HAS
BEEN THOROUGHLY WORKED OUT
AND WE PUT INTO THESE CON-
STRUCTIONS ONLY MATERIAL OF
THE MOST APPROVED AND SUB-
STANTIAL KIND, INCLUDING

American Wire Rope

NO matter what the contour of
the ground, we will construct a
tramway that will transfer ma-
terial in a bee-line at minimum expense;
and no grades are too steep to surmount;
no rivers or valleys too wide to cross;
and no grading, bridges or viaducts of
any kind are required. There is prac-
tically no limit to the length of these
tramways. We have one line carrying
ore twenty-one miles.

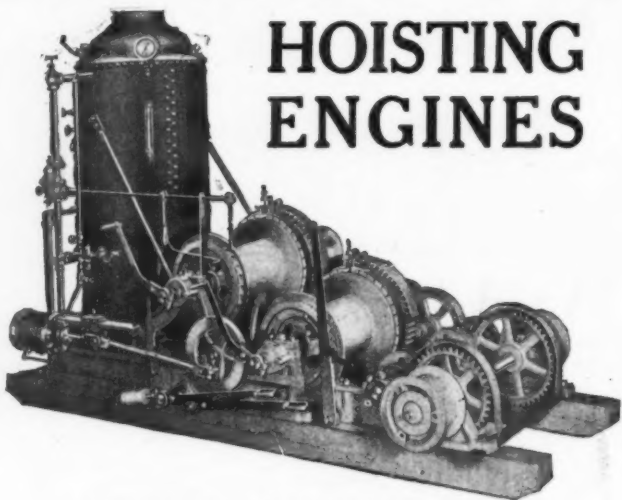
*Write for our complete descriptive book
showing every form of application. And we
will be glad to work upon propositions sub-
mitted to us, returning full and complete
specifications and costs of construction.*

American Steel & Wire Company

Chicago, New York, Worcester, Cleveland, Pittsburgh,
Denver. Export representative, U. S. Steel Products Co.,
30 Church St., New York. Pacific Coast representative,
U. S. Steel Products Co., San Francisco, Los Angeles,
Portland, Seattle.

LIDGERWOOD

HOISTING ENGINES



Double cylinder friction drum engine with boom swinging gear.

Lidgerwood hoists are in use by many of the largest contractors on the biggest buildings and most important engineering works of the world.

CABLEWAYS

for the economical hoisting and conveying of material in excavating and building Canals, Locks, Dams, Dry Docks, Filter Beds, Power Houses, Bridges, Sewers, etc.

LIDGERWOOD MFG. CO.,

96 Liberty St., New York, N. Y.

NEW ORLEANS, WOODWARD, WIGHT & CO., Ltd.

Philadelphia Pittsburgh Chicago San Francisco Seattle London, Eng.

WICKES BROTHERS MURPHY LITTLE CHAMPION

ROCK DRILLS

FOR

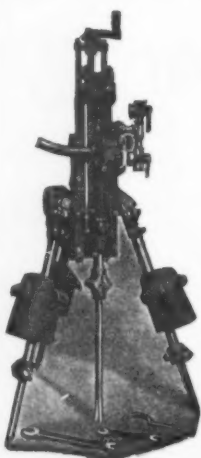
AIR OR STEAM

WICKES BROTHERS

443 CLAREMONT AVENUE
JERSEY CITY, N. J.

AGENCIES

L. M. Rumsey Mfg. Co.	- - -	St. Louis, Mo.
J. M. Alexander	- - -	Atlanta, Ga.
Moore-Handly Co.	- - -	Birmingham, Ala.
Thos. L. Barret	- - -	Louisville, Ky.
Smith Drill and Mach'y Co.	- - -	Chattanooga, Tenn.
Colonial Supply Co.	- - -	Pittsburgh, Pa.

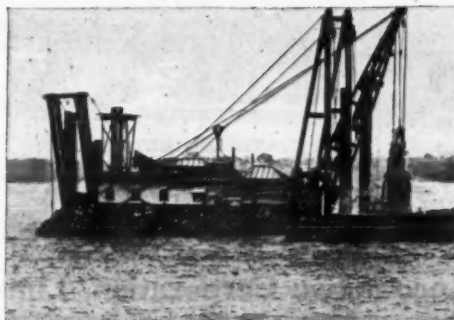
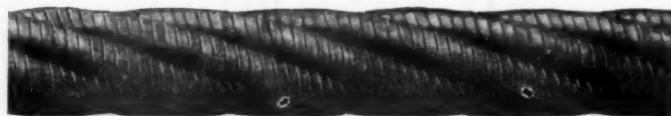
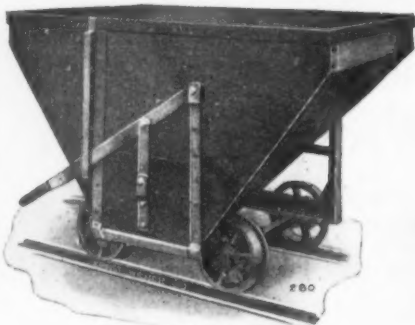


Consult with Specialists on INDUSTRIAL RAILWAYS

We design, build and supply industrial railways complete and for every purpose. Our stock is complete. We can save you money in first cost and upkeep. Cars in all styles, switches, crossings, frogs, etc. Plate, Tank and Structural Iron Work a specialty. Write us.

EASTON CAR & CONSTRUCTION CO., Easton, Pa.

New York Office: 28 Church St., New York City
Philadelphia Office: Stedman Bent, Real Estate Trust Building
Pittsburgh Office: Chas. T. Topping & Co., Bessemer Building
Boston Office: H. C. Freeman, 141 Milk St.



WATERBURY ARMORED ROPE

(Gore Patent)

Successfully Meets Every Dredging Requirement

It combines Strength with Elasticity and Durability with Flexibility.

It represents the first real improvement in wire rope construction in many years.

This improvement consists of winding each strand with flat drawn wire having convex edges, and especially tempered to take the wear and protect the tensile strength wires against abrasion and damage due to exposure.

It is a rope every dredge man should know about.

We also manufacture Standard Wire Rope of every construction and size and carry a large stock at our different branches for prompt shipment to meet the demands of the dredge trade.

WATERBURY COMPANY

80 SOUTH STREET, NEW YORK

CHICAGO
365 East Illinois St.

SAN FRANCISCO
113 Davis St.

NEW ORLEANS
919 Canal-Louisiana Bk. Bldg

BRANCH OFFICES:



DALLAS, TEXAS
Powell & Ellet Co.

911 Southwestern Life
Bldg.

BOSTON
220 Franklin St.

HOISTING ENGINES STEAM HAMMERS DERRICKS

For Contractors, Bridge Builders, Dredging,
and General Hoisting Duty.

Send for Catalog.

National Hoisting Eng. Co.

HARRISON, N. J.

W. E. AUSTIN CO., Atlanta, Ga., Southern Sales Mgr.



THE LAST WORD IN COMPRESSED AIR LITERATURE

is embodied in our new bulletins. Order them by number, please. In what branch of the subject are you interested and which of them shall we send you?

AIR COMPRESSORS

- 34-A. Class "G" Steam Driven "Chicago Pneumatic" Compressors.
- 34-B. "Chicago Pneumatic" Power Driven Compressors.
- 34-C. "Chicago Pneumatic" Gasoline Driven Compressors.
- 34-D. "Chicago Pneumatic" Corliss Compressors, Steam Driven.
- 34-F. Design and Construction Class "G" "Chicago Pneumatic" Compressors.
- 34-G. Air Receivers, Aftercoolers, Reheaters, etc.
- 34-H. General Instruction for Installing and Operating "Chicago Pneumatic" Compressors.
- 34-L. General Pneumatic Engineering Information.
- 34-N. Small Power Driven Air Compressors.

- 34-O. Instructions for the Installation and Care of "Chicago Pneumatic" Gasoline Driven Air Compressors.
- 34-S. Class "N" Steam and Power Driven, Enclosed Type Air Compressors.
- 34-T. Class "M" Corliss Enclosed Type Self-Oiling Four-Valve "Chicago Pneumatic" Steam Driven Compressors.

ROCK DRILLS AND HAND DRILLS

- 148. Chicago Valveless Hand Drills.
- 149. Chicago Portable Mine Hoist.
- 150. Chicago Coal Drills.
- 151. Chicago Slogger Rock Drills.
- 152. Chicago Gatling Drills.
- 153. Chicago Sinker.
- 154. Chicago Stopper.
- 172. Chicago Plug and Feather Drill.

ADDRESS DEPT. R. R.

CHICAGO PNEUMATIC TOOL COMPANY

1059 Fisher Bldg.,
Chicago.

Branches Everywhere.

50 Church St.,
New York.

STROUDSBURG=QUALITY

We Standardized the 125 Lbs. Pressure Hoisting Engine
FOR MORE WORK

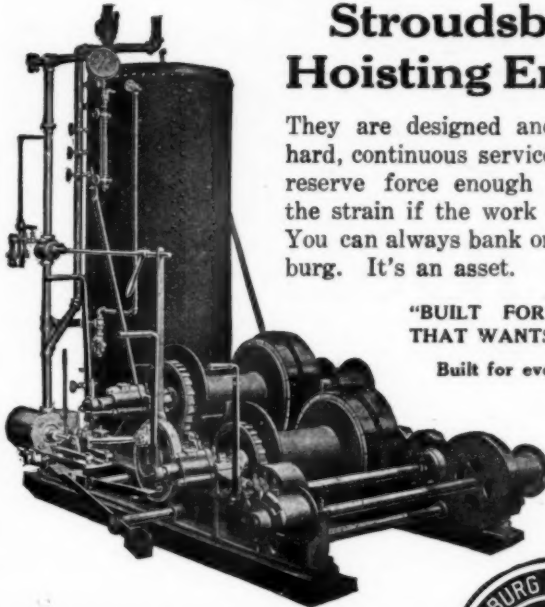
in less time use a

Stroudsburg Hoisting Engine

They are designed and built for hard, continuous service, and have reserve force enough to take up the strain if the work requires it. You can always bank on a Stroudsburg. It's an asset.

"BUILT FOR THE MAN
THAT WANTS THE BEST"

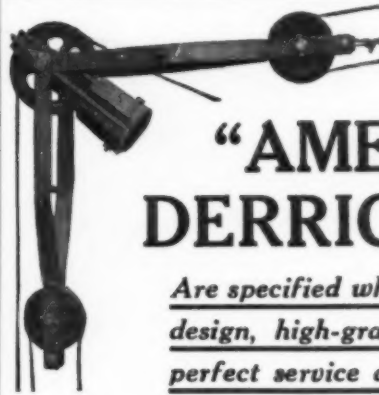
Built for every purpose



The
Up-to-date
Contractor's
Favorite

**STROUDSBURG ENGINE
WORKS**

Office and Works: No. 64 N. 3rd St.
STROUDSBURG, PA.



"AMERICAN" DERRICK IRONS

*Are specified wherever their scientific
design, high-grade construction and
perfect service are known.*

Safety, freedom from expense and lost time, economical operation, are some of the features of "AMERICAN" Derrick Irons.

All "AMERICAN" Irons are much heavier than ordinary derrick irons. The bearing surfaces of the mast bottoms and steps are chilled, reducing wear and friction.

The Sheaves are all made from a special grade of hard iron. They contain more metal than ordinary sheaves; the grooves are extra deep and carefully smoothed and rounded. The flanges are thicker than usual—they will not chip nor break. "AMERICAN" sheaves are longer through the hub—more bearing surface—less friction.

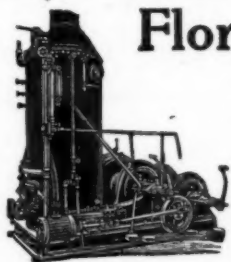
AMERICAN HOIST & DERRICK CO.
ST. PAUL, MINN.

Chicago
Calgary
Portland
New York

Edmonton
Spokane
New Orleans

Denver
Pittsburgh
San Francisco

Vancouver
Winnipeg
Los Angeles
Seattle



Flory Hoisting Engine STEAM AND ELECTRIC

For Contractors, Bridge Building, Dredging, Cableways and General Hoisting Duty.

WRITE FOR 1913 CATALOG

S. FLORY MFG. CO.
BANGOR, PA.

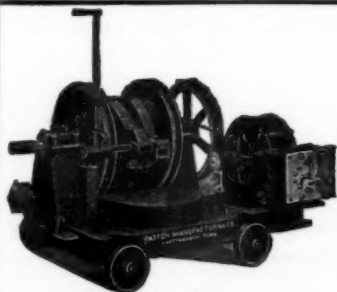


The DAKE Independent Derrick Boom SLEWING ENGINE

SIMPLE COMPACT DURABLE

Write for complete catalog of our
Contractors' Machinery, etc.

DAKE ENGINE CO.
Grand Haven, Mich. U. S. A.



Patent Double Platform Hoists

Driven by Electric-Motor, Gasoline
or Steam Engine

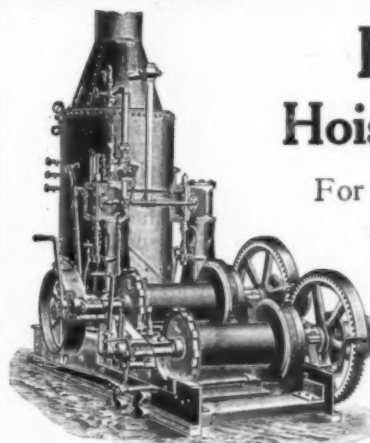
Single and Double Drum Hoists

PATTEN MFG. CO.

CHATTANOOGA, TENN

Postal Brings Catalogue

"Peerless" AIR COMPRESSORS Catalogue
AMERICAN COMPRESSOR & PUMP CO.
11 S. FRONT ST., BALTIMORE, MD.



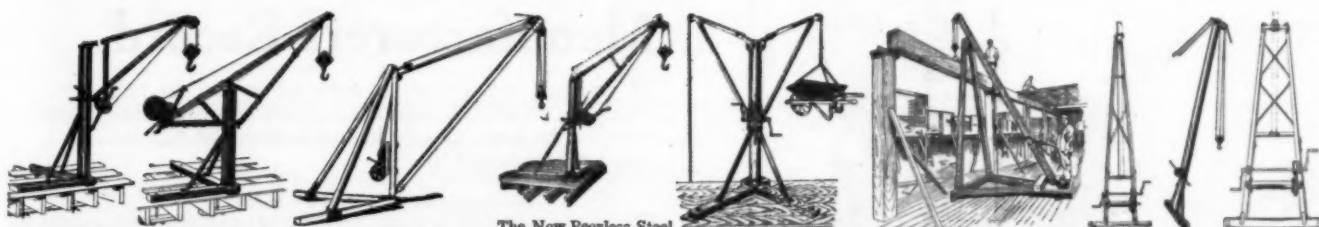
BYERS Hoisting Engines

For loggers, lumbermen
and contractors.

See what we can
do for you.

Write us for cata-
logue. It's free.

The John F. Byers Machine Co., Ravenna, O.



SASGEN DERRICK CO.

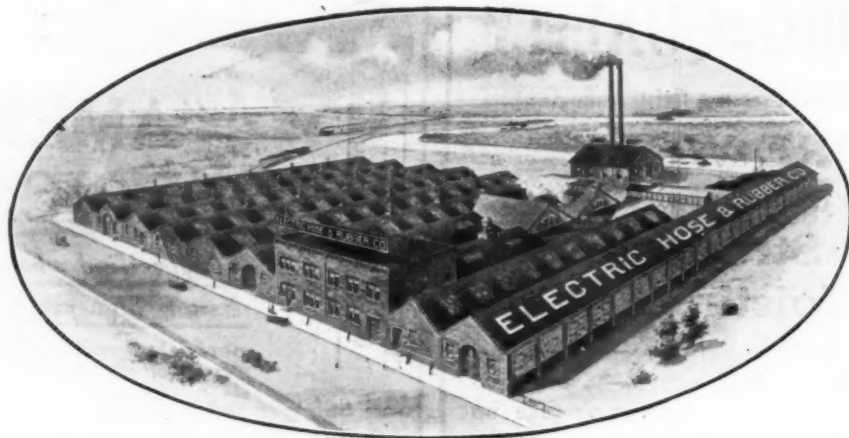
2053-57 N. Racine Ave.
Chicago, Ill.

Southern Agent, ROSS HUNTER
Candler Bldg., Atlanta, Ga.

Write for New
Illustrated Circular No. 10

We Manufacture
DERRICKS
of almost all descrip-
tions and have the
**Largest and Most
Complete Line of
Builders Derricks**

Satisfaction
and
Prompt Shipment
Guaranteed.



ELECTRIC HOSE For All Purposes

Last year we made and sold over twelve million feet. Pretty good evidence of quality.

Why not let one of our branches or representatives supply your needs. Catalog for the asking.

Philadelphia—414 Arch Street.
New York—19 Warren Street.

CHICAGO—304 W. Randolph Street.

San Francisco—507 Mission Street.
New Orleans—513 Poydras Street.

BRANCH OFFICES:

REPRESENTATIVES:

Atlanta, Ga., Crane Company.
Baltimore, Md., Baltimore Belting Co.
Birmingham, Ala., Crane Company.
Cincinnati, Ohio, Ohio Rubber Co.
Cleveland, Ohio, Ohio Rubber Co.
Detroit, Mich., H. D. Edwards & Co.
Kansas City, Mo., Gustin-Bacon Mfg. Co.

Knoxville, Tenn., Crane Company.
Little Rock, Ark., Crane Company.
Memphis, Tenn., Crane Company.
Oklahoma City, Okla., Crane Company.
Pittsburgh, Pa., Johnston-Morehouse-Dickey Co.
Richmond, Va., Smith-Courtney Co.
St. Louis, Mo., Day Rubber Co.

Electric Hose & Rubber Co., Wilmington, Del.



CATERPILLAR
TRADE MARK

Handling a big
Austin-Western
elevating grader at
Mission, Texas—
plenty of power.

Road Jobs Pay

Road jobs pay if you can work right along without stopping. This is where it pays to buy a Caterpillar to begin with, instead of waiting until you have tried all the "cheaper" engines.

Weather doesn't tie up the Caterpillar—neither do bad roads. It is earning money, rain or shine, summer or winter.

And it outlasts all those that apparently cost less. It's the cheapest in the end—less delay, fewer repairs, greater net profit.

Short-turning, good clearance, two speeds if wanted, handy reverse, easy steering, no damage to sub-grade, durable construction—these are things that make the Caterpillar work pay.

Get our new contractors' book, No. CG 75—full of stories by successful Caterpillar Users.

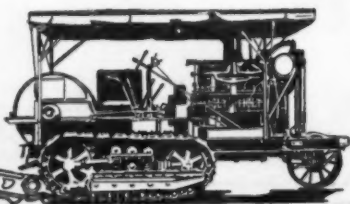
The Holt Mfg. Co., Inc.

Peoria, Ill.

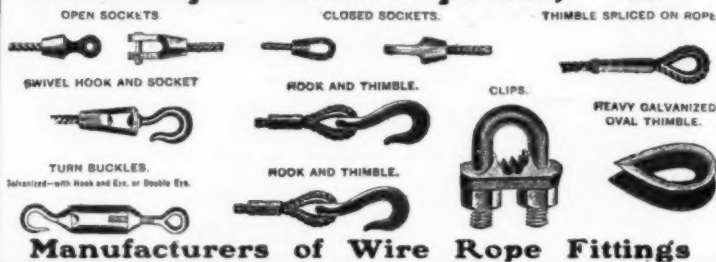
Houston, Texas

50 Church St., New York

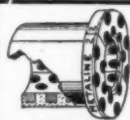
Send for
Bulletin
CG 75



Williamsport Wire Rope Co., Williamsport, Pa.



Manufacturers of Wire Rope Fittings



DIVIDED
Flanged Bushing

METALINE

(Trade Mark Reg.)

Most Reliable
Least Wearing
Positively Oilless
No Fire Danger
BUSHINGS for
LOOSE PULLEYS

THE METALINE COMPANY
Corporate name changed from North American Metalins Co.
West Ave., Cor. W. 3rd St., Long Island City, N. Y.

Merchants & Miners Trans. Co.

VACATION TOURS.

Personally conducted, Baltimore to Boston, New Castle, White Mountains, etc., Wednesday, July 23, 1914. Twelve-Day Trip, \$67.50, including all necessary expenses.

Baltimore to Boston, Newport, Narragansett Pier, etc., Wednesday, August 19, 1914. Ten-Day Trip, \$52, including all necessary expenses. Send for itinerary. W. P. TURNER, P. T. M., Baltimore, Md.

If You Are Interested in the South

You need the

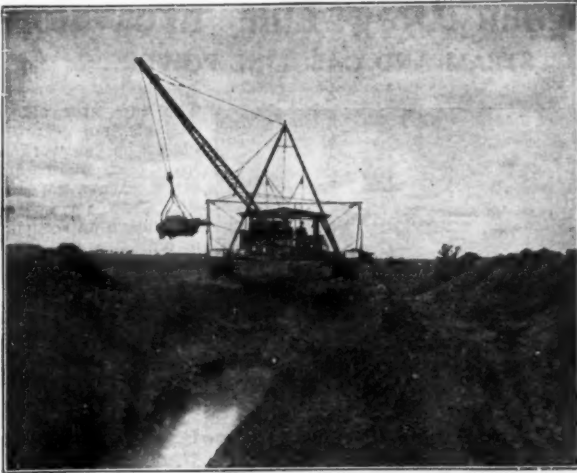
Manufacturers Record

If you are not a regular subscriber and do not receive every issue, you are missing many opportunities to keep closely in touch with the section you are interested in.

Send us your subscription today.

\$4.00 for One Year

Less Than 8c. a Week



AT LAST!! A Light-Weight Excavator That Saves You Money The Economy Excavator

Has a $\frac{5}{8}$ yard bucket swinging 4 to 6 times per minute. Does the same work as a heavier machine and also work impossible with a heavier machine. As the name suggests; it is an economy—in fuel, labor and maintenance. The Economy Excavator will make more money for you. Write today for interesting descriptive matter.

Gade Excavating Co., 301-5 People's Bank Bldg. Iowa Falls, Iowa

WHY IS IT

that there is often such unreasonable difference in the cost of operating two different

SUCTION DREDGES

apparently working under the same conditions?

Because one is designed without regard to efficiency, while the other is a well proportioned unit, built regardless of the cost of a hundred small details in construction that cut the maker's profits, but which gives you an efficient machine.

Your good opinion of us is a big asset, and we want to acquire it.

THE NORBOM ENGINEERING CO.



Our Cutters have interchangeable blades, regularly kept in stock. Our Pumps are good and heavy; you can rely on them.

Philadelphia, Pa.

Keystone Explosives

QUALITY—EFFICIENCY

Nitro-Glycerine Dynamite	Quarry Powder
Ammonia Dynamite	Gelatine Dynamite
Low Freezing Dynamite	"Farm Right" Dynamite
Non-Freezing Dynamite	Permissible Powders

EVERYTHING IN HIGH EXPLOSIVES

The success of every blasting operation depends on the Quality and Efficiency of your explosive.

WE SPECIALIZE ON EXPLOSIVES

We will be pleased to submit prices and send you our HIGH EXPLOSIVE Catalogue.

Keystone National Powder Company
EMPORIUM, PENNSYLVANIA

LOW COST Blasting

SEND INQUIRIES TO
DEPT. 125

DU PONT POWDER CO.

Established 1802
WILMINGTON, DEL.

DEPENDS as much on proper selection and use of explosives as upon expert labor supervision.

We are sure our 112 years' experience will be of valuable help in choosing the explosive best suited to your blasting work.

Use this expert knowledge to your advantage in reducing the cost per ton or yard of blasting work.

If you wish to keep posted on the progress of the South
read the
MANUFACTURERS RECORD

Price \$4.00 a year, or six months for \$2.00



Make Deep Ditches For 5 Cents a Foot

You can make clean, smooth ditches 3 to 4 feet deep and 5 to 6 feet wide at the top in the hardest ground or the wettest soil, at an average cost of from 3 to 5 cents a running foot. You can finish the job quickly and do it better in half the time and at less than half the cost of hand-work—by using

Atlas Farm Powder
THE SAFEST EXPLOSIVE

Just drill holes, load them, fire, and the work is done! You take no risk and need no experience to get satisfactory results every time from Atlas Farm Powder, made especially for agricultural use and sold by dealers near you.

Use Atlas Farm Powder to dig ditches and drain your wet fields. Use it to blast stumps and boulders into pieces easy to handle. Use it to save time and money in many kinds of work. Use it to break up the productive subsoil.

Send Coupon for Valuable Book—FREE

Every farmer and fruit-grower will find it worth while to read our large new book, "Better Farming," fully illustrated, that tells how to increase farm profits with Atlas Farm Powder, the Safest Explosive. Mail the coupon and get it FREE.

ATLAS POWDER COMPANY General Offices WILMINGTON, DEL.

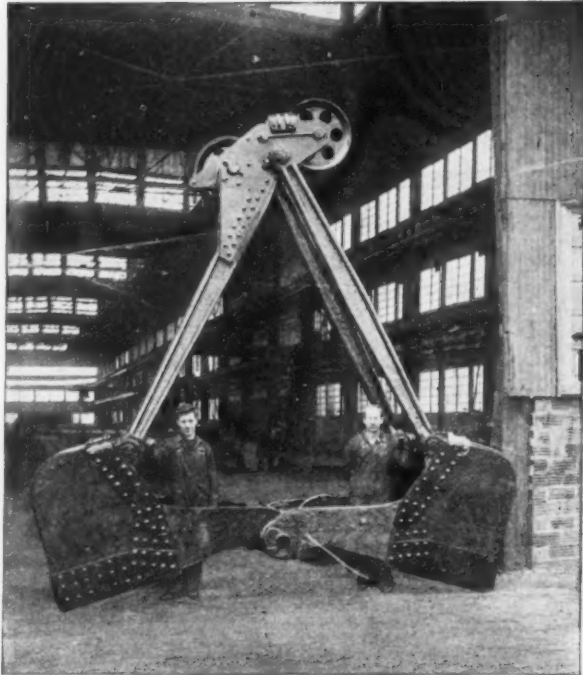
Sales Offices: Birmingham, Boston, Jersey, Knoxville, New Orleans, New York, Philadelphia, St. Louis

Fill Out and Mail This Coupon

Atlas Powder Co., Wilmington, Del. Send me your 66-page illustrated book, "Better Farming," telling how to blast ditches, stumps, etc., most economically.

Name.....

Address..... Mfr. R-Jy. 2

VIEW
OF
BUCKET
OPENVIEW
OF
BUCKET
OPEN

Special Excavating and Dredging Bucket

This Excavating and Dredging Bucket specially designed and constructed for The Dunbar & Sullivan Dredging Co. for handling of blasted rock, sand and gravel, etc., under water. Used on their contract No. 70 A, Champlain Canal project, work being done at Waterford, N. Y.

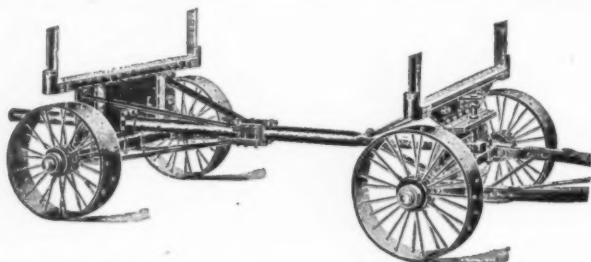
When closed the scoops measure 8' 2" x 4' 7", and bucket stands 13' 2" high. The scoops open to 12' 6".

The weight of bucket is 13,600 lbs., massive, all steel, and of the famous Williams construction.

We make buckets for all purposes and for the handling of all classes of material.

Send for catalog.

THE G. H. WILLIAMS COMPANY
1515 Rockefeller Building CLEVELAND, OHIO



STEEL WHEELS for any purpose, any size to fit any axle, with or without roller bearing. **STEEL AXLES**, straight or bent; or **WOOD AXLES, LOG WAGONS, FARM TRUCKS, TRAILER WAGONS.**

Lumber Buggies and Carts

— ALSO —

DESIGNERS of special mountings of all kinds of concrete mixers, gasoline engines, well drills, etc., built to customers' requirements.

Our heavy hauling equipment considered the standard the country over.



Write us about your needs. Let us help you solve your hauling problems.



WRITE FOR CATALOGUE

ELECTRIC WHEEL CO., MFRS.

5 Ohio Street, QUINCY, ILL., U. S. A.

Monighan Drag Line Excavators

STEAM AND GASOLINE POWER



The excavator shown in this cut can be placed on the work at less cost than any other excavating outfit. Crew for operating machine consists of only two men. The excavator is mounted on traction wheels provided with self-propelling mechanism. Boom is 40 feet long. One cubic yard bucket. We will give you, upon request, full information regarding capacity, cost of operation, etc.

We build excavators with booms from 40 to 125 ft. long and buckets from one to three cubic yard capacities.

Write for Excavator Catalog.

MONIGHAN MACHINE CO., 2022 Carroll Ave., CHICAGO

Agent—P. B. ENGH { 341 Pacific Electric Bldg., Los Angeles, Cal.
704 Hooker & Lant Bldg., San Francisco, Cal.

Investigate This Money Saving Tractor



Works successfully on wet, soggy, swampy, sandy, marshy, uneven ground—when others fail—besides on dry land.

The Four-Wheel Drive Tractor

Means money to you. It means no time lost, no trouble, no delays, and low operating cost.

You need our catalog MT
Write for it today

THE HEER ENGINE CO. Portsmouth, O.

STUEBNER'S HOISTING BUCKETS



are in use handling Coal, Ores, Sand and Earth in every Port of the United States.

Stuebner's Patent Drop Bottom Buckets

for handling Concrete on all large Water-Works and Power Dams

Catalogue and prices on application.

G. L. STUEBNER IRON WORKS
Borough of Queens



Vernon and East Avenues
New York City



THE AMERICAN STEAM SHOVEL

Revolving Type. Quick acting. Strong. Simple. Easy to operate. Get new Catalog.

THE AMERICAN CLAY MCH. CO., BUCYRUS, OHIO

STANDARD ENGINE LATHES



14" to 24" swing
HIGH GRADE TOOLS

With all Modern Improvements.

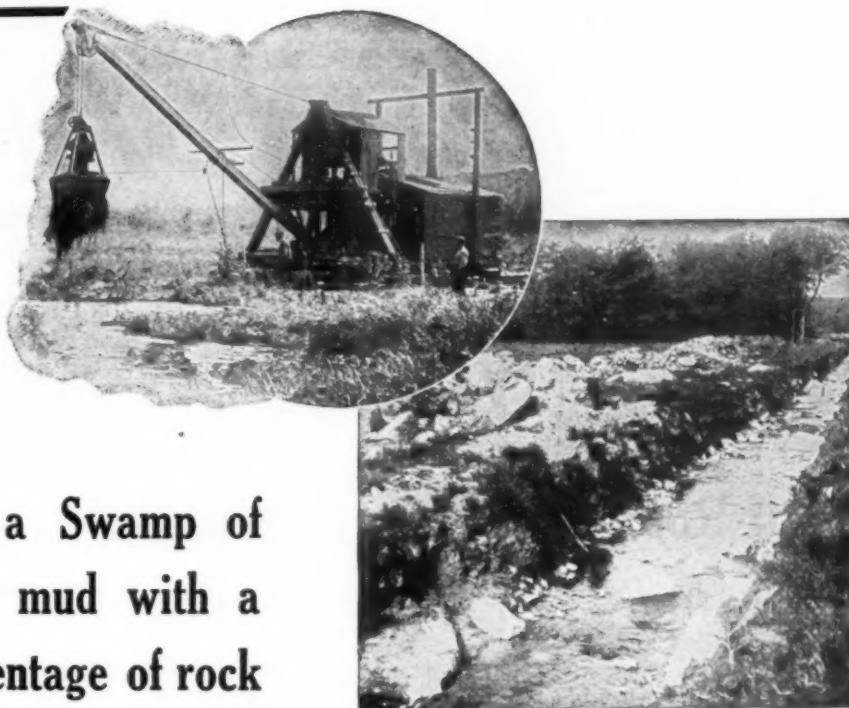
THE GREAVES-KLUSMAN TOOL CO.
CINCINNATI, OHIO, U. S. A.

GERLACH

Circular, Band and Cylinder Saws, New Roller Saw Swages and Sharpeners

Are unexcelled in Europe or America. We use the best steel, the finest equipment, and have sixty years behind us.

THE PETER GERLACH CO., Cleveland, Sixth City



**To drain a Swamp of
soft, oozy mud with a
large percentage of rock**

was a problem which confronted the New Haven Water Company.

Their method of solving it is shown in these illustrations.

They used a

HAYWARD Orange Peel Bucket and Skid Excavator

The 12 cubic foot Hayward Skid Excavator was particularly adapted to this work. Because of its weight being distributed over a large area, it could not sink in, as would be the case with a machine mounted on wheels.

The Skid Excavator had another advantage. It backs away from the excavation, therefore eliminating the necessity for draining the ditch of water.

The adaptability of a Hayward Orange Peel Bucket to excavating work where ROCKS are encountered is surely too well known to need much comment.

With this equipment, about 200 lineal feet of ditch, 8 feet wide, 6 feet deep, were excavated per day, or approximately 350 cubic yards of this MUD and ROCK.

Catalogs and pamphlets issued on these two pieces of equipment and on all other types of Hayward Digging and Excavating Machinery. May we send them?

WRITE.

The Hayward Company, 50 Church St., New York

STANDARD

MEXICAN

**Asphalt Road Oils
Asphalt Macadam Binders**

**Mixing Asphalt
Paving Asphalt**

STANDARD ASPHALT ROAD OIL, 40%, 50% and 60% grades, for all conditions of road surface where freedom from dust is demanded.

STANDARD ASPHALT MACADAM BINDERS "A," "B" and "C," for resurfacing old roads and constructing new roads under the penetration method.

STANDARD MIXING ASPHALT, for Topeka specifications and all forms of bituminous concrete.

STANDARD PAVING ASPHALT, for SHEET ASPHALT pavements subjected to heavy traffic.

All of the above products carefully refined from MEXICAN ASPHALT BASE OIL and absolutely uniform in consistency.

Write for booklet giving detailed information.

STANDARD OIL COMPANY

(New Jersey)

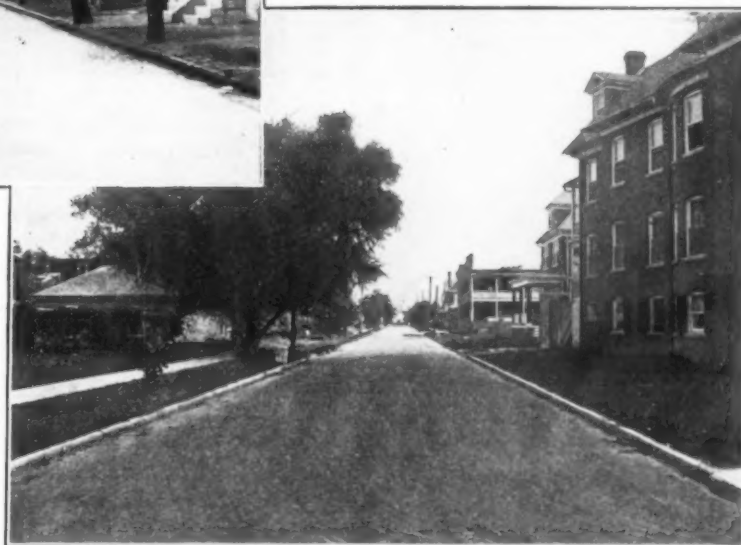
Road Oil Department

BALTIMORE, MD.

NEWARK, N. J.



McCulloh Street,
Baltimore, Md.,
laid with
Aztec Asphalt



Fourteenth Street,
Norfolk, Va.,
laid with
Aztec Asphalt

Pavements Laid With



Are an Evidence of Prosperity Among Southern Cities and Towns
An Attraction for Home-Seekers and Investors
A Lasting Satisfaction to Taxpayers and City Officials

Aztec Asphalt has been selected by—

BALTIMORE	WASHINGTON	GINTER PARK	RALEIGH	LAURENSBURG	BIRMINGHAM
ROLAND PARK	NORFOLK	CHARLOTTE	HENDERSON	CHARLESTON	ATLANTA
EASTON	PORTSMOUTH	CONCORD	LUMBERTON	COLUMBIA	JACKSONVILLE

Also a vast number of leading cities throughout the country, which are evidencing their prosperity by the use of this material for high-grade pavements.

Write Us for Booklets, Quotations and Other Information

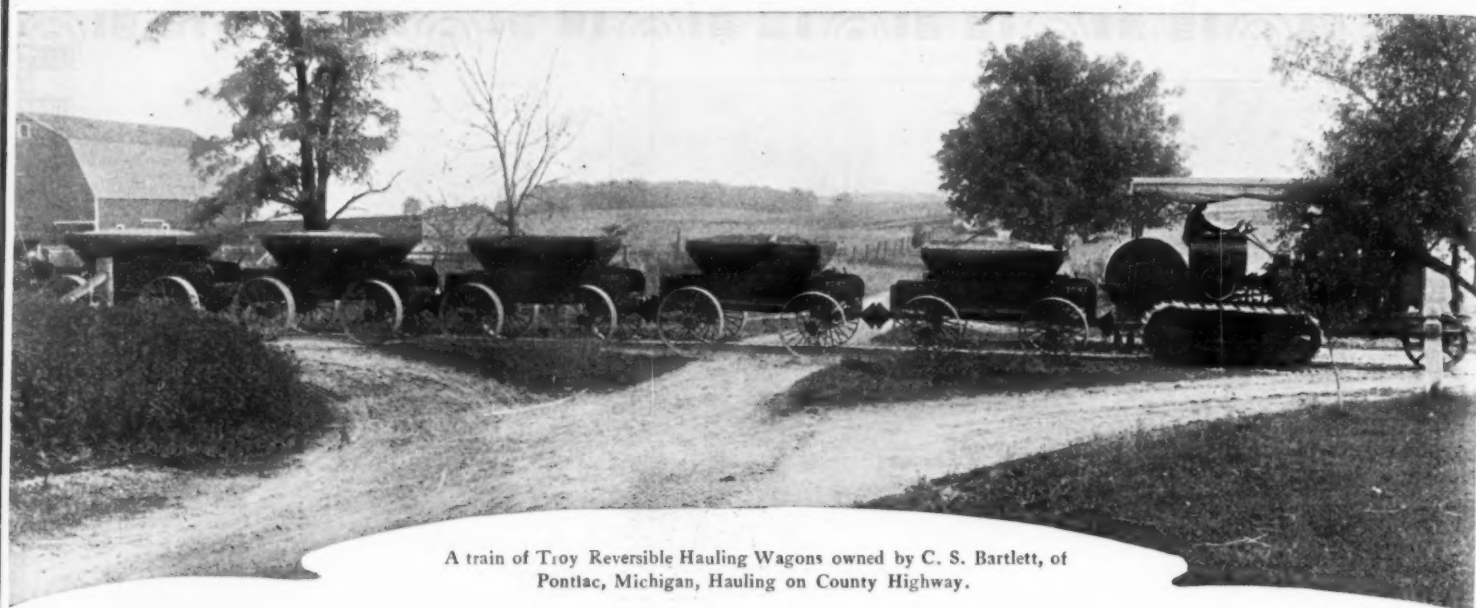
The U. S. Asphalt Refining Co.

90 West Street, New York

CHICAGO
PHILADELPHIA

MONTREAL

BALTIMORE
NORFOLK



A train of Troy Reversible Hauling Wagons owned by C. S. Bartlett, of Pontiac, Michigan, Hauling on County Highway.

“There Is Nothing to Be Compared to Troy Reversible Wagons”

The Virginia Construction Co., General Contractors,
Lynchburg, Va.

Four 3½-yd. Troy Reversibles, hauling stone for a Road Construction Contract in Culpeper County, Va., were the cause of the above statement—and the letter from which this is quoted was not composed at Troy and sent to these people for signature, but came to us through the regular channels.

No—there is nothing to be compared to Troy Reversibles if you want to do big hauling economically.

—if you want to cut your hauling costs 50 to 80 per cent.,

—if you want to meet ALL varying hauling conditions and STILL make money.

Next to going out to a Troy Reversible job and getting first-hand, unbiased facts, the best thing to do is to get Troy Hauling Book M. R.

THE TROY WAGON WORKS CO.

106 E. Race Street, TROY, OHIO

DISTRIBUTORS:

G. C. Hodges, Brooklyn.
Standard Supply & Equip. Co., Phila.
Henry H. Meyer & Co., Baltimore.
H. H. Hoover & Co., Pittsburgh.
W. S. Brown & Sons, Birmingham.
A. Baldwin & Co., New Orleans.

So. Texas Implement Co., Houston.
W. M. Pattison Supply Co., Cleveland.
Hodson-Feenaughty Co., Portland.
E. R. Bacon & Co., San Francisco.
W. L. Cleveland & Co., Los Angeles.
Landes & Co., Salt Lake City.

Western Metal Mfg. Co., El Paso.
N. J. Dinnen & Co., Winnipeg.
Canadian Equipment & Supply Co., Calgary.
C. Paquet & Co., Quebec.
W. McNally & Co., Montreal.

Why Wire-Cut-Lugs Reduce The Labor Cost of Brick Pavement

Every paving contractor recognizes the following truths:

(1) The more uniform the lug and the size of the paving brick the less effort required to handle; and more square yards of pavement can be laid per day.

(2) The easier flush joints are obtained the fewer applications of cement grout are required.

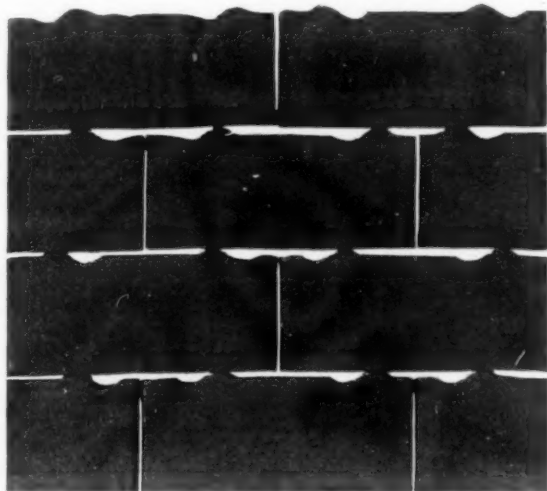
(3) A brick that will give the above advantage at no greater cost than a brick which will *not* is certainly the paving brick wanted.

Such paving brick is

DUNN Wire-Cut-Lug BRICK

Now let us follow up the above outlined advantages

(1) THE UNIFORMITY OF THE LUGS, as clearly shown on the attached illustration, are obtainable in *every* wire-



Showing uniformity of lugs and positive separation of blocks for admission of filler.



cut-lug brick, due to the very process of uniform wire-cutting as opposed to the re-pressing. Wire-cutting gives perfect lugs. Re-pressing means that many lugs are malformed or part remains in the mold. It is certainly easier for a workman to pick up and place a brick with uniform, *well-formed* lugs on *one side only*. Any laborer will agree with you in this.

(2) THE UNIFORM WIRE-CUT-LUGS, as opposed to re-pressed lugs, allow free flow of the filler clear down to the bottom of each brick. And the wire-cutting or *roughening* of the bonding surface of the brick (as opposed to the smoothness of re-pressing) still further strengthens the bond. The square edges of Dunn Wire-Cut-Lug Bricks means *smooth joints*. The double-bevelled ends aid again in uniform alignment and bonding.

(3) THE PRICE OF WIRE-CUT-LUG BRICK is no greater than re-pressed brick—and its advantages are much greater, as shown.

Without increasing the cost of good pavements, Dunn Wire-Cut-Lug Brick insures the quality of the pavement, because you get Dunn Engineering Supervision Service, gratis, when you use Wire-Cut-Lug Brick. And you can get Wire-Cut-Lug Brick from any one of the independent, competing licensees listed below, who have proved that they can make good paving brick. More data? Write.

Dunn Wire-Cut-Lug Brick Company

Conneaut, Ohio

LICENSEES:

Corry Brick & Tile Company, Corry, Pa.
One plant at Corry, Pa.
United Brick Company, Greensburg, Pa.
One plant at Conneaut, Ohio.
Sterling Brick Company, Olean, N. Y.
One plant at Olean, N. Y.
Reynoldsville Brick & Tile Co., Reynoldsville, Pa.
One plant at Reynoldsville, Pa.
Danville Brick Company, Danville, Ill.
One plant at Danville, Ill.
Wabash Clay Company, Veedersburg, Ind.
One plant at Veedersburg, Ind.
Clinton Paving Brick Co., Clinton, Ind.
One plant at Clinton, Ind.

Alton Brick Company, Alton, Ill.
One plant at Alton, Ill.
Deckman-Duty Brick Company, Cleveland, Ohio.
One plant at Cleveland, Ohio.
One plant at Carrollton, Ohio.
One plant at Malvern, Ohio.
Tuna Valley Pressed Brick Company, Bradford, Pa.
One plant at Bradford, Pa.
Foster Paving Block Company, Bradford, Pa.
One plant at Bradford, Pa.
One plant at Youngsville, Pa.
One plant at Binghamton, N. Y.

Metropolitan Paving Brick Company, Canton, Ohio.
Four plants at Canton, Ohio.
One plant at Willow, Ohio.
Bessemer Limestone Company, Youngstown, Ohio.
Three plants at Bessemer, Pa.
Peebles Paving Brick Co., Portsmouth, Ohio.
Two plants at Portsmouth, Ohio.
Southern Clay Mfg. Co., Chattanooga, Tenn.
One plant at Robbins, Tenn.
One plant at Coaldale, Ala.
McAvoy Vitified Brick Co., Philadelphia, Pa.
One plant at Perkiomen Junction, Pa.
Windsor Brick Company, Akron, Ohio.
One plant at Akron, Ohio.



EARN'S ITS OWN WAY

The First Cost of a

JEFFREY Mechanical Wagon Loader

is soon paid by the saving in Time, Labor and Expense.

Will handle a ton of coal, or from one to two tons of stone, sand, gravel, etc., per minute. Relieves the drivers of the drudgery of hand shoveling.

Enables the teams to make more trips daily.

Has Self-Propelling Device for feeding into or out of the storage pile.

Adjustable Angle Screen gives efficient screening action.

Write for Bulletin No. 96, giving full particulars.

JEFFREY MANUFACTURING CO., Columbus, O.

HIGH GRADE PAVING BRICK

BEST TESTERS AND MOST DURABLE

THE CARLYLE PAVING BRICK CO., PORTSMOUTH, O.

ROOFING GRAVEL

Mine-Run Screenings for Concrete and Road Construction

AMERICAN BALLAST COMPANY

300 Board of Commerce Building

KNOXVILLE, TENN.

Crushed and Broken Granite

Weston & Brooker Quarry Company

LARGEST OUTPUT

QUICKEST DELIVERIES in the South Atlantic States

QUARRIES, CAYCE, S. C.
OFFICE, Columbia, S. C.

BALFOUR QUARRY COMPANY — Asheville, N. C.

Crushed Stone and Sand

For all purposes. In any Quantity. Delivered to points in the Carolinas, Georgia and Florida. We make PROMPT shipments.

FRANK A. FURST,
President

COLIN McLEAN,
Vice-President

MICHAEL T. HORNER,
Secretary

JOSEPH J. HOCK,
Treas. & Gen'l Mgr.

Sand

Building Concrete Paving

Washed Gravel

In Car, Scow and Barge Lots

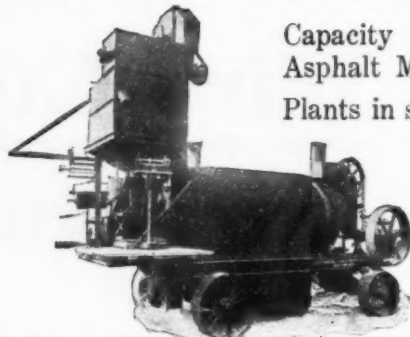
ARUNDEL SAND AND GRAVEL COMPANY

BALTIMORE, MD.

OFFICE—806 Fidelity Building.

WHARVES—Pier 2 Pratt St. and Foot of Fell St.

Cummer Road Asphalt Plant



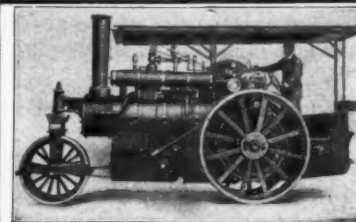
Capacity 1000 yds. 2" top or Asphalt Macadam per day.

Plants in stock.

Make test before buying.

Cummer one-car 2000-yard capacity plants in stock.

THE F. D. CUMMER & SON CO. CLEVELAND, O.



ROAD ROLLERS

ALL TYPES ALL SIZES

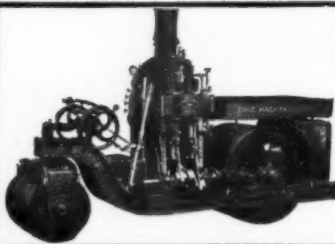
Steam and Gasoline

The Kelly-Springfield Road Roller Co.

SPRINGFIELD

OHIO

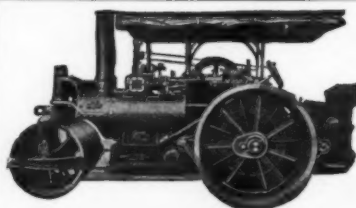
GET CATALOG



Get "ERIE" ROLLERS

for LONG SERVICE and BEST RESULTS

ERIE MACHINE SHOPS
ERIE, PENNA.



Buffalo Pitts Rollers

BUILT FOR SERVICE

Made in all types and sizes for all purposes, 2½ to 20 tons.

BUFFALO STEAM ROLLER CO.
BUFFALO, N. Y.

Reliance Crushers

Are fully described in our new CATALOG, which we send

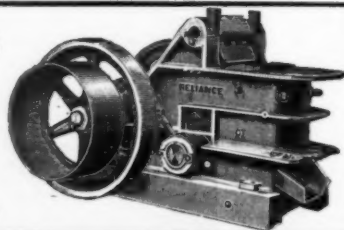
FREE

Universal Road Machinery Co.

KINGSTON, N. Y.

ROCHESTER

BOSTON

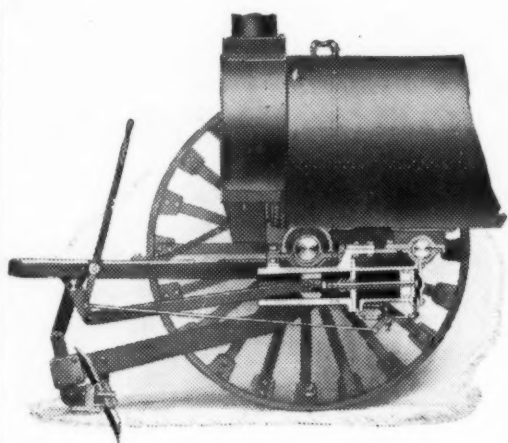


Manufacturers of

HIGH GRADE PAVING BRICK

COPELAND-INGLIS SHALE BRICK CO. Office, 610 1st Nat. Bank Bldg. BIRMINGHAM, ALA.

Proposals advertised in the Manufacturers Record bring good results.



A Great Money Saver for the Road and Street Contractor

It first saves on the original purchase price. When you are buying a roller, for a small additional sum you can have this Scarifier attached, provided you buy the Huber Roller. Thus you have a Roller and a Scarifier, and have paid for but one outfit.

While the roller has traction power to pull this Scarifier easily, when the attachment is not used that same power can be used for other hauling, such as wagons loaded with stone, grading outfits, etc.

Scarifying bar carries nine of these heavy spikes, which are adjustable and reversible. Tears up road or street full width of roller at rear. Spikes are held in ground by cushion steam compression. They are raised clear of ground by steam power. All operator needs to do is to move a straight lever forward or back. As an economy proposition on road work you cannot beat the Huber Roller and Scarifier.

The Huber Manufacturing Co.

Dept. 10

MARION, OHIO

MARION Revolving Steam Shovels

For Better Road Work



Can be operated by one man. Swings in a complete circle. Invaluable for road and street grading and all classes of excavating. Built strong and for continuous work. Used and endorsed by contractors the world over.

Catalog upon request.

The Marion Steam Shovel Co.

Station H, Marion, Ohio, U. S. A.

CHICAGO, Monadnock Block

NEW YORK, 80 Church St.

ATLANTA, 1411 Candler Bldg.



M-O "18" 3/4-YD. SHIPPING WEIGHT 17 1/2 TONS

MARION-OSGOOD 3-4 Yd. Revolving Shovel

With Independent Steam-Steering Engine. Also Combination Hand-Steer Operated from Either Side of Shovel

The Marion-Osgood little revolving shovels are as complete in all details as the larger machines, because they have swinging engines; boom engines; horizontal hoisting engines with link reverse; steam hoisting friction; cut spur gears, large high pressure boiler; pump and injector boiler feeders; oil pump for engines; combination steel and oak boom and handle; steel sheaves; large water tank, etc. They can be mounted on railroad trucks or changed over to clam shell machines when desired, and are arranged to be operated by one man.

Write for descriptive circular.

THE MARION-OSGOOD COMPANY

MARION, OHIO, U. S. A.

EASTERN OFFICE, 51 STATE STREET, ALBANY, N. Y.

INVESTIGATE THIS OUTFIT

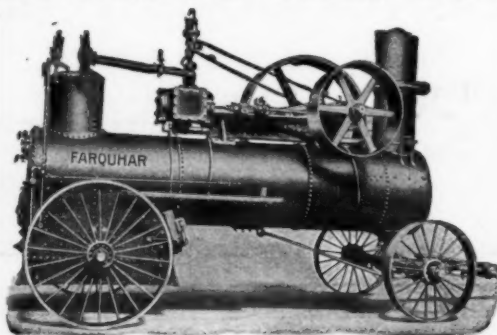
ENGINE

Self-contained plain slide valve of the "D" pattern.

Cranks machine ground from solid steel forgings.

Flat saddle.

Self-adjusting packing rings on piston.



The Farquhar Locomotive Portable Rig produces maximum Horse Power from fuel consumed. It is built abundantly strong throughout ready for long years of constant service. 72-page Catalogue giving full particulars of the Farquhar Portable Engines and Boilers, also Steam and Gas Tractors, sent free on request. This book will help you solve your power problems. Write for it today.

A. B. FARQUHAR CO., Ltd. Box 433, York, Pa.

BOILER

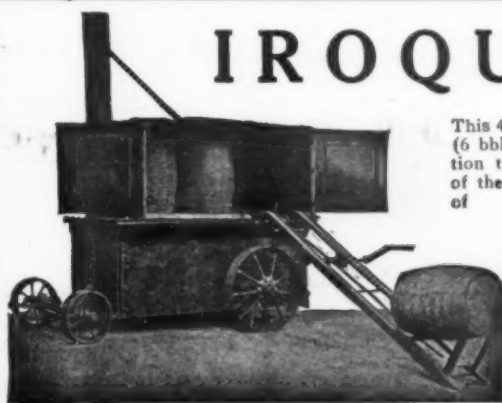
Open bottom water front variety.

Easy to clean.

Special stay bolts from crown sheet to dome head.

Strongly braced and stayed throughout.

IROQUOIS



This 400 gal. Asphalt Heater (6 bbl. rack), steel construction throughout, is only one of the complete Iroquois line of

Trouble Proof, Long-Service Paving and Road-Making Tools and Machinery
Tandem and Macadam Rollers

Send for Catalogues.

The Barber Asphalt Paving Co.

(Iroquois Works)

178 Walden Ave., Buffalo, N. Y.



Look About You

on the highways and railroads
of the United States.

You will see thousands of

American Ingot Iron Corrugated Culverts

in perfect condition after long service.

And you will see here and there a corrugated culvert which has rusted to failure. These you will *always* find were made from some of the materials claimed to be—"just as good as American Ingot Iron."

What's the answer?

For full information on American Ingot Iron Corrugated Culverts, Plates, Sheets, Roofing and Formed Products, write

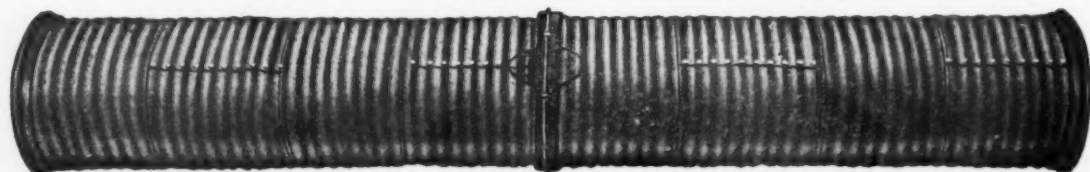
ARMCO CULVERT PUBLICITY BUREAU, Cincinnati, O.

S
A
L
I
S
B
U
R
Y

S
T
R
E
N
G
T
H

QUALITY OF MATERIAL USED IS THE FINEST AND PUREST KNOWN
CONSTRUCTED BY EXPERIENCED WORKMEN ALONG MODERN LINES
FOR WEAR. RESULT—

BEST CULVERT ON EARTH



SALISBURY METAL CULVERT COMPANY

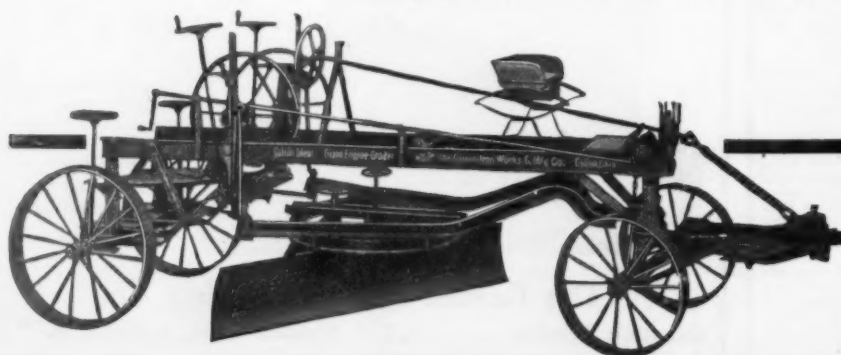
SALISBURY, N. C.

S
A
L
I
S
B
U
R
Y

D
U
R
A
B
I
L
I
T
Y

For the Hardest Kind of Continuous Work

Where the machinery must stand constant strain, investigate the Galion Ideal Giant All-Steel Reversible Engine Grader. For use with either power, roller or tractor.



Under absolute control of one man always. Especially noted for its economy and efficiency. Used with great success by many prominent contractors for years. Catalog on request.

The Galion Iron Works & Manufacturing Co.
117-119 E. Main Street
GALION, OHIO

SOUTH BRANCH OFFICES:

209½ E. Main St., Richmond, Va. 116 Marietta Street, Atlanta, Ga.
112-14 S. Front St., Memphis, Tenn. 403 Trust Bldg., Durham, N. C.
902 Natl. L. & E. Bank Bldg., Columbia, S. C.

